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A RESEARCH STRATEGY FOR SOCIAL IMPACT ASSESSMENT: A TALE OF THR--ETC(U)
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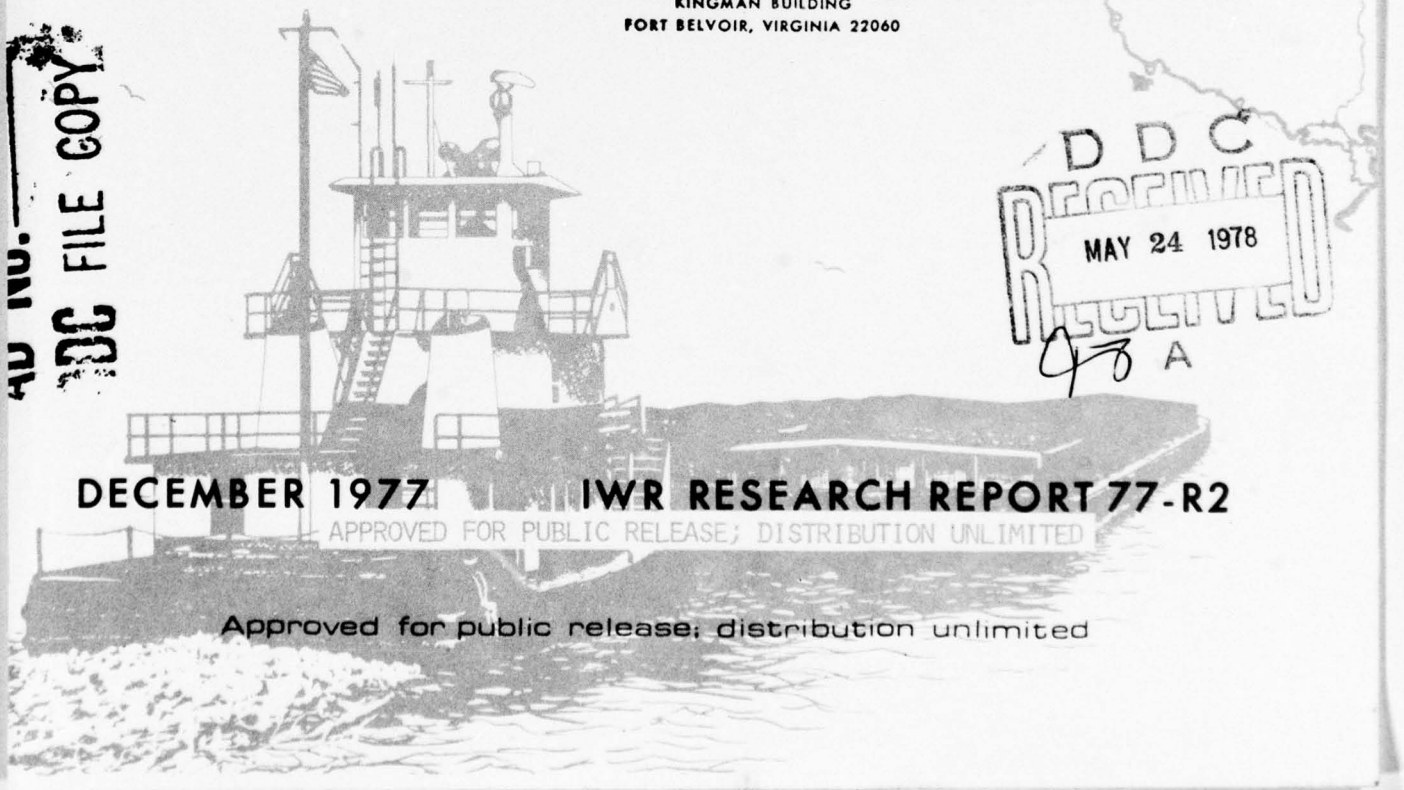
A RESEARCH STRATEGY FOR SOCIAL IMPACT ASSESSMENT

A TALE OF THREE CITIES

UNDER CONTRACT NO. DACW31-75-C-8023

A REPORT SUBMITTED TO:
U.S. ARMY ENGINEER INSTITUTE FOR WATER RESOURCES
KINGMAN BUILDING
FORT BELVOIR, VIRGINIA 22060



DECEMBER 1977 IWR RESEARCH REPORT 77-R2

A RESEARCH STRATEGY FOR SOCIAL IMPACT ASSESSMENT:

A TALE OF THREE CITIES

A Report Submitted to:

U.S. Army Engineer Institute for Water Resources
Kingman Building
Fort Belvoir, Virginia 22060

Under

Contract No. DACW31-75-C-8023

By

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This report demonstrates an approach to social impact assessment based on the differential response of various communities to the stimuli of construction and operation of a major public works project. The report is one of a continuing series of studies of the impacts of the completed McClellan-Kerr Arkansas River Navigation System conducted by the Corps of Engineers.

Three small communities along the waterway are studied through analysis of archival data. Each community has responded uniquely to the presence of the → next page

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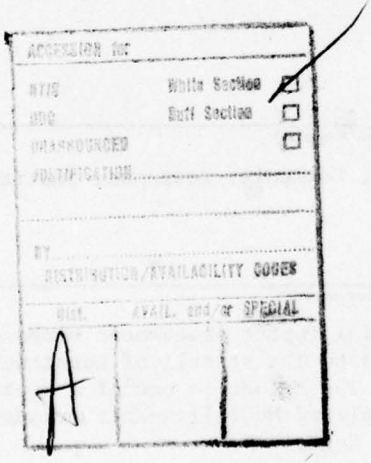
waterway, and the report documents analyses which relate these responses to hypothesized differences in the fundamental structure of the communities.



This report is one of a series of impact-studies by the Institute for Water Resources dealing with the McClellan-Kerr Arkansas River Navigation System. All the reports listed below may be purchased from:

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Springfield, Virginia 22151

1.) "Recent Developments in the McClellan-Kerr Arkansas River Navigation System Area." IWR Research Report 77-R1

2.) "A Research Strategy for Social Impact Assesment: A Tale of Three Cities." IWR Contract Report 77-R2

3.) "An Application of the Interregional I/O Model for the Study of the Impact of the McClellan-Kerr Arkansas River Multiple Purpose Project." IWR Contract Report 77-2

4.) "Analysis of Expenditures for Outdoor Recreation at the McClellan-Kerr Arkansas River Navigation System." IWR Contract Report 77-4

5.) "Population Change, Migration and Displacement Along the McClellan-Kerr Arkansas River Navigation System." IWR Contract Report 77-5

6.) "McClellan-Kerr Arkansas River Navigation System: Hydroelectric Power Generation." IWR Research Report 77-R4.

7.) "A River, A Region and A Research Problem." IWR Research Report 71-6

8.) "Regional Response Through Port Development: An Economic Case Study on the McClellan-Kerr Arkansas River Project." IWR Contract Report 74-5

9.) "Evaluation of Interregional Input-Output Models for Potential Use in the McClellan-Kerr Arkansas River Multiple Purpose Project Impact Study." IWR Contract Report 74-6

10.) "Discriminant Analysis Applied to Commodity Shipments in the Arkansas River Area." IWR Research Report 74-R2

11.) "An Overview of the Impact Study of the McClellan-Kerr Multiple Purpose Arkansas River System." IWR Research Report 75-R3

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FOREWORD

This report is one of a series examining the impacts of the completed McClellan-Kerr Arkansas River Navigation System. It reflects one approach to social impact assessment, based on the systematic comparison of differential community response along the waterway. This study is limited to an analysis of three communities in the 1,000-5,000 population class and relies on archival sources of data.

It can be argued that the community is the most important unit of measurement for social impact assessment and the differential responsiveness is as much socio-political as economic in character. Furthermore, archival sources add a rich set of data reflecting the communities' sense of issues and alternatives over time.

The following quote from the scope of work describes the specific objectives and the constraints imposed on this contract:

> "Ongoing economic impact studies concentrate on functional economic areas which are dominated by the three standard metropolitan areas (Tulsa, Fort Smith and Little Rock). Sociologists place a special emphasis on community in research because of particular attributes of social interaction. The purpose of this research is to develop (1) research strategy which relates differential community response to the McClellan-Kerr project; (2) explicate the relation of community response to the process of decision via public involvement; (3) determine the variables which describe community response and compare to the socio-economic variables normally utilized in socio-metric profiles, in indices of social well-being and in social impact studies; (4) identify factors which may be associated with social cohesion as an

indicator of the quality of life; (5) identify the concurrence, if any, of significant extraneous forces and variables which appear to coincide with differential community response to the McClellan-Kerr project; and (6) determine the significance of dislocation costs to the identified impacts.

"The scale of this stage of research is limited to the development and preliminary testing of a research design which will address the issues listed above. It is anticipated that the exploratory phase would assist the formulation of an impact assessment strategy for the completed McClellan-Kerr project and for projects in planning status."

We received a variety of comments in view of the report. They range from the view that the methodology should be useful to the field planners in determining the impact of water resources development on the future growth and development of adjacent communities, to a view that the methodology is insufficiently comprehensive to satisfy current Engineer regulations. The communities selected do not demonstrate significant dislocation impacts, the the choice of only small communities fails to account for interaction between communities and between communities and higher levels of government. Several comments viewed archival data as potentially severely biased, preferring instead, survey approaches.

We believe the report presents a substantial advance in the methodology of social impact assessment. Archival data provides a rich source of information which should not be ignored. The underlying hypothesis of the study is sound and important, that the response of the community to the presence

of a major water resources project is a function of community structure and leadership. The report introduces a variety of data sources which may be new to Corps planners and clearly describes the thought process used in choosing them. The report contributes a perspective that should be of value to any planner.

PREFACE

Human beings have a limitless capacity for hope - the hope that we can control and guide our lives so that not only our own, but also future generations may survive and know a better world. Toward that end, we Americans have become increasingly conscious of the effects of our actions on global resources both physical and human. Being neither omniscient nor omnipotent, we can only surmise on the basis of the best available knowledge, what the technological revolution of this century can do to the world around us. We can make educated and, with any luck, inspired guesses. In order to accumulate knowledge which will provide us with solid bases for making such judgments, to make or not to make a given change in the environment, appropriate research methodologies must be formulated. The aim of this report is to demonstrate a research strategy which will assist in determining the likely consequences of environmental changes on the lives of human communities. This report, original in its approach, identifies a need for a typology of communities or cities and for relating these types to scenarios of potential responses to environmental changes. In the research strategy recommended, it suggests study of the community qua community over time, the use of archival data, and social indicators complementing or replacing some that are currently used in social impact assessment.

ACKNOWLEDGMENT

This project owes a great deal to the intellectual stimulation and untiring research contributions of Dr. Austin Van der Slice, Professor Emeritus of The American University. He generously contributed his expertise to the challenge posed by an intriguing subject. I want also to thank Ms. Mary Commins and Mr. John Kovach, both graduate students at The American University who, as research assistants, made significant contributions. A debt of gratitude is due to staff members of the U.S.A.C.E. (in particular, Mr. David Burroughs of the Little Rock office) and to personnel at the various library and historical associations who assisted me in locating and procuring inaccessible resources. Finally, a special thanks to Ms. Hildegard Topper for finalizing the manuscript.

CHAPTER I: BACKGROUNDS

Introduction. The course of the 1450-mile Arkansas River was dramatically affected by the McClellan-Kerr Multiple Purpose Arkansas River Project (MKP). The changes in its course as a result of the construction of dams and reservoirs and other necessary work, complemented and accompanied changes in the life of the region. There is visual evidence of these changes: barges move along the river; new storage facilities and port-related activities dot the scene; beautiful recreational sites are situated at the various reservoirs which control the waterway. Somewhat less obvious are the monetary costs and benefits. However, these may be discerned through established procedures of economic analysis, e.g., cost-benefit analysis. Evidence of social changes, i.e., modifications and innovations in the style of living of whole groups of people, is more difficult to see and evaluate. The purpose of this report is to focus attention on the changes in community life which parallel the development and actualization of the MKP.

Interest in, and significance of, social changes and the social impact of technological modification of the environment transcend the specific locale of Arkansas and Oklahoma. From the Halls of Academe to those of the federal government, there is a pervasive sense of the discretionary power we, as contemporary humans, have to choose among alternative styles of living, of allocating money resources, of exploring possibilities and alternatives which may determine the fate of

individual, group and even planetary survival. Alvin Toffler, author of the popular book Future Shock, (1970, p. 433), stresses the importance of careful screening of innovations:

> Today we need far more sophisticated criteria for choosing among technologies. We need such policy criteria not only to stave off avoidable disasters, but to help us discover tomorrow's opportunities. Faced for the first time with technological overchoice, the society must now select its machines, processes, techniques, and systems in groups and clusters, instead of one at a time. It must choose the way an individual chooses his life style. It must make super-decisions about its future.
>
> Furthermore, just as an individual can exercise conscious choice among alternative life styles, a society today can consciously choose among alternative cultural styles. This is a new fact in history. In the past, culture emerged without premeditation. Today, for the first time, we can raise the process to awareness. By the application of conscious technological policy - along with other measures - we can contour the culture of tomorrow.

However, the wise consideration of the ramifications of choice needs to be based on an appreciation of the nature of the human condition. As Toffler says, "We have taught ourselves to create and combine the most powerful technologies. We have not taken pains to learn about their consequences." (p. 440). This, of course, is not strictly true. There have been writers and sages who have warned us by way of scholarly and utopian literature of the dangers facing a technologically oriented culture which prizes "progress" at all costs, with little thought of attendant problems or consequences.

The Environmental Concerns of the Government. The Federal Government, in response to a collective "ombudsman" voice, has taken action. The National Environmental Policy Act of 1969 (Public Law 91-190) stated as its declared aim:

> "To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; (to) promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man."

The Act identifies as part of national concern and policy, federal concern about the standard of living (the quality of life) of the American population, urbanization and population growth, and the welfare of succeeding generations.

Reinforcing the intended import of the NEPA is the River and Harbor and Flood Control Act of 1970 (Section 122, Public Law 91-611), which requires that the Secretary of the Army, through the Chief of Engineers, propose "guidelines designed to assure that possible adverse economic, social and environmental effects relating to any proposed project have been fully considered in developing such project...". Moreover, consideration was to be given to "eliminating or minimizing such adverse effects and the following:

1. Air, noise & water pollution;
2. Destruction or disruption of man-made and natural resources, esthetic values, community cohesion and the availability of public facilities and services;
3. Adverse employment effects and tax and property value losses;
4. Injurious displacement of people, businesses, and farms; and,
5. Disruption of desirable community and regional growth."

In response to this mandate, "Guidelines for Assessment of Economic, Social, and Environmental Effects of Civil Works Projects" (ER 1105-2-105) was disseminated by the Office of the Chief of Engineers. Among the recommendations in the guidelines is the desirability of considering "with project" and "without project" conditions. The Corps of Engineers has, in the intervening years, developed a reputation for being pioneers in formulating sound procedures for "environmental impact statements" and "social impact statements."

Sociology and the Corps of Engineers. The concerns of the Corps and other agencies of the Federal Government relate to the central interests of sociologists -- the nature of society and social change. The concerns of impact assessors and academic sociologists are closely related because of basic assumptions both groups make. The former assume that communities have recognizable patterns of living in relation to the physical environment. Technological changes altering the physical environment also change social relationships. The latter agree with this assumption and state further that the social scientist is in a position to identify the patterns of social relationships in a community, thus enabling him to describe and even predict how people introduce and respond to environmental changes. It is evident that the merging of the interests of the Army Corps of Engineers and academic sociologists is certainly auspicious and potentially fruitful.

The Scientific Method. The researches of the sociologist often seem to be remote from the interests and concerns of persons engaged in meeting immediate survival needs of individuals, groups and societies. Yet, when we realize that sociologists are scientists, who as such, are engaged in a search for regularities in nature which make for categorization and prediction, their endeavors become significant.

Historically, sociologists have been interested in the subject of social change: the initiation of change by individuals, groups and societies; the function change performs for society; the effect of change on groups and the broad range and variety of change-inducing factors and phenomena. Stimulated by the "Chicago School of Sociology," the interest in change has diverged in two directions. On the one hand, stemming from the early leadership of Park, Burgess, Warner and Hughes, the process of change in terms of interactions within communities (cities) was studied. On the other hand, developing from the work of W.F. Ogburn and his students, researchers looked at the role of inventions, i.e., technological changes, and their impact on society. The aim of this study is to integrate portions of these two perspectives from the vantage point of history. The sociologist raises questions whose answers are needed by those engaged in planning and implementing environmental change:

a. What is the nature of community life, its pattern and description, prior to the introduction of technological change and afterwards?

b. How do the simultaneous processes of maintaining or changing community life styles vary within any given community, as well as between communities?

c. How can as manifold and complex a thing as a "community" or a "city" be studied with any expectation of meaningful results?

It is to questions of this kind that this report of responses from small communities to the initiation and actualization of the McClellan-Kerr Multiple Purpose Arkansas River Project, is addressed.

Statement of the Problem. During the short time that our society has become conscious of the threat to the quality of life through neglect of natural resources, interest in environmental impact assessment has become one of our national priorities. Concern was voiced for the conservation of these vital commodities, and reaction by federal agencies followed. Public consciousness has been aroused. Today, much effort is being devoted to anticipating the potential effects of programs deliberately modifying environmental resources. When these efforts are directed at anticipating the effects of proposed environmental changes on social relationships (e.g., community cohesion), the term "social impact assessment" becomes appropriate. The impact on the smallest communal group (i.e., the

family) and on the largest (the total population as its life-and-death interest is affected), may be the subject of consideration. In this report our concern is with impacts on the small city *qua* small city, community *qua* community. We are looking at the whole network of relationships of a group of people living together in a relatively limited geographic area, who have a sense of common identity and a shared image of their city. Thus, the term "social impact assessment" is being applied to the study of what has happened or might happen to communities (and all their components) when mines are opened, as in Montana; when subways are planned, as in Washington, D.C.; or when dams are being planned, as in South Dakota. Social planning needs to be considered as an integral part, because there is a price to be paid by human beings for all environmental change.

This kind of constraint on the construction of projects directed toward environmental improvement is so new that there has been little opportunity to compare *anticipated* impacts with actually ensuing ones. Basic research is indispensable if appropriate methodologies are to be developed.

The interest of the Institute for Water Resources in the conduct of *ex post facto* social and economic analyses of the MKP, while not enabling pre- and post-construction analyses, poses the challenge of reconstructing pre-project life and observing

post-project realities. And in so doing, it necessitates the development of a research strategy and methods.

Leven and Read (July 1971) appreciated the importance of this problem when they recommended ex post facto analysis of the Arkansas River project area. They envisaged it as facilitating future planning and development of water projects.

CHAPTER II: THE MKP AS THE OBJECT OF SOCIOLOGICAL RESEARCH

Focus of the Report. This report addresses itself to the problem of developing a research strategy appropriate to the study of the impact of waterway changes on community qua community over a period of time. Since the locus of the study is the Arkansas River area where a major project has been completed, the opportunity to study what has been the social impact and devising a methodology on the basis of it, offers promise for the development of social impact analysis in situations where environmental change is to be introduced. Three questions present themselves:

1. What has been, and what continues to be, the social impact of the MKP on small cities?

2. How are similarities as well as differences in community response to be explained?

3. What research procedures would be useful in answering the above questions?

Answers to these questions have been sought through an exploratory study designed to:

a. formulate a research strategy which may be useful in assessing social impact of the MKP and other projects;

b. identify factors associated with differential responses by small cities to the MKP over the period of time covering its introduction, through construction and actual utilization; and

c. provide baseline data for future analyses of social impact of the MKP.

Rationale for the Study. For a number of years, the U.S.A.C.E.'s

Institute for Water Resources has been engaged in assessing the impacts of the MKP on the life of the region. Most of the studies produced by IWR's Center for Economic Studies have analyzed economic considerations, e.g., anticipated and actual cost/benefit ratios of transportation from Little Rock to Tulsa. Generally, the units of analysis are the entire region or OBERS areas. Indicators of social relationships - divorce, employment and educational achievement, for example, are identified in gross terms providing comparison of OBERS areas or state and national differences. The interim report, "McClellan-Kerr Arkansas River Navigation System: Socio-Economic Impact Study," by the Economics Branch, Southwestern Division Corps of Engineers, Dallas, Texas (March 1974), provides an example of this. The intent of the socio-economic indicators is to offer baseline data without interpretation.

EARLIER SOCIAL STUDIES

Two studies focusing on specialized aspects of the impact of the navigation system on communities are worthy of mention. The first, undertaken to discern the impact of displacement and relocation, was a case study of a transplanted community, Mannford, Oklahoma (Morgan, 1970). The original location had been flooded by the Keystone Reservoir. This research was directed to finding out the satisfaction and/or dissatisfaction of members of a community which was moved *in toto* to a new location with new homes, churches, schools and the like.

Contrasting with the primarily social impact approach of the Mannford study is a project being conducted by the Department of Agricultural Economics of Oklahoma State University. It is directed toward ascertaining expenditures of users of recreational facilities made possible by the multiple-purpose project. By identifying the social characteristics of the recreation users at eight lakes and locks and dams along the Arkansas River, it provides an indication of the social changes occuring in the area. (Badger and Shriner, 1975).

A Detailed Research Strategy. This research project is offered as an attempt to further the development of social impact assessment studies along the waterway in Oklahoma and Arkansas. As described in the preceding pages, it is intended to develop a research strategy to identify factors accountable for differential responses of small cities along the Arkansas River to the MKP. In succeeding in its aim of being an exploratory study, originating and testing methodologies, it will also contribute to the body of knowledge about historical and social changes (and the processes involved) occurring in other cities and their environs.

It is further anticipated that, as a result of such a study, policy makers and social impact assessors will be provided with

a. Methodologies for developing community profiles, including social indicators of the quality of community life which might supplement the socio-economic variables currently in use.

b. Valuable resources for the conduct of future research.

c. A valuable model on which to base future studies.

d. An increased awareness of the questions to be asked and answered in social impact studies.

The Arkansas River valley has been used to originate and test the methodology. Using historical data on selected small cities and their surroundings, it has been possible to unravel details of community life over a period of time, including the part the river has played in the social life of the area. This exploration has led to insights into the directions research might take, as well as to a definition of the techniques and tools most useful for this research.

Plan of Report. In the next section, the Arkansas River valley and its small cities will be discussed in relation to the project. After that, the research design developed specifically in order to formulate a research strategy for future application to small cities along the MKP will be explained. This will be followed by community typologies which constitute a major part of the proposed design. They were created on the basis of intensive and extensive research. Also stemming from the research are a series of scenarios for furthering understanding of community processes for coping with social change. These scenarios are detailed in the final chapter.

The Setting. Standing like sentries at either "end" of the Arkansas River are the major metropolitan areas of Little Rock, Arkansas, and Tulsa, Oklahoma. The terrain between these areas reflects the variations of America's people and resources. The river flows from the prairie lands of Oklahoma through the beautiful Ozark ranges to the delta lowlands along the Mississippi. The area includes fertile farmlands, craggy hills, rich coal and oil resources. It has suffered from severe droughts as well as floods. The flora and fauna are as variegated as the climate, the soil and the altitudes.

Detailed and comprehensive descriptions of the area may be found in any number of texts and the numerous brochures advertising its attractions as vacationland. The purpose of this account is to provide a background for discussing the relationship of the area's primary resource - its people - to the river. This report is based on the premise that "the past is prologue;" that the impact of the development of the Arkansas River in terms of providing flood control, navigation, hydroelectric power and other benefits is dependent upon the ongoing historical processes occurring in local communities and larger population groups. These processes are manifested in the traditional patterns of economic, political and social activities of communities. They are evidenced in the cultural heritages of migrants of yesterday and today. The contacts of people which made possible the establishment of the states of Arkansas and Oklahoma in

1836 and 1907, respectively, continue to mesh the old with the new, long-established friendship patterns and enmities, earlier moralities and present ones. In the course of time, settlements became towns and villages, cities and, in some cases, ghost towns. These changes have occurred in response to immediate pressures and opportunities which the land and its people provided. They have also been in the form of responses to events in the larger society: wars, depressions, prosperity, new technologies and global shrinkage. It is a truism not to be forgotten that life along the Arkansas River is dynamic and ever-changing, characteristics shared by all life.

The Communities. There is no doubt that the U.S. is an urban society. Yet, when studying the communities along the Arkansas River, one is impressed by there being at least a hundred places with populations of 500 to 5,000 people within a radius of 8 miles of the river. Most of them are not named on state maps. Census publications generally absorb them into "county" figures. But to the inhabitants they possess strongly flavored identities as varied as the personalities of individuals.

The very names of these communities mirror the diversity of their origins, their landscapes and their aspirations and beliefs: Mt. Hope, Coal Hill, Altus, LeFlore and Chickalah. Within but a few miles of the river, there is an enclave of German Catholics producing wines and serving foods comparable

to those in Bavaria. Not far from there live descendants of the "Trail of Tears," both those who were forced off their land and the heirs of the victors. In the hilly Ozark area are communities which were originally settled by Kansans and people from bordering Tennessee, Kentucky and more northerly midwestern states. The influence of the French and Spanish heritage of the Louisiana Territory, coupled with the traditional plantation cultures of the South, permeate the more southern and eastern towns and cities. Growing industries have brought into some of the towns persons of Slavic and Italian origins. And since the sixties, the retirement programs of modern corporations and unions are making it possible for workers to spend their retirement years there. (Recently, Ft. Chaffee was reopened to provide housing for hundred of Vietnamese refugees).

Although the heritages are mixed, the two states are predominantly composed of native-born whites identified with a broad range of religious denominations, with Baptist and Methodist predominating. Over the generations, agriculture has been the primary source of livelihood for the population near the river. However, since the late '50's, both states have been attracting manufacturing concerns. Table A-1 in Appendix A provides an overview of the selected socio-economic conditions of 18 counties constituting the Arkansas River Basin corridor. It is based on the extensive demographic analysis of Heffelfinger (1974). Comparable data for Yell and Franklin counties which are included

in the corridor and for Sequoyah County in Oklahoma, are presented in Table A- 2 of the Appendix. A map of this corridor also appears there.

The Taming of the Arkansas River. The land adjoining the Arkansas River was occupied by several Indian groups - the Great and Little Osages, the Quapaw and the Cherokees. The river not only provided them with transportation, but also brought French and other traders to the Spanish-held territory. It also yielded fertile fields for cultivation. First, Spain awarded large tracts of land to settlers; later, the U.S. Government allotted them to veterans of the Revolutionary War and the War of 1812 as bounties.

The burgeoning population along this natural road to the Far West paralleled the development of steamboat transportation. However, due to the uncertainties of the water levels of the river, the traffic was highly irregular and the farmlands suffered from periodic flooding. The River and Harbor Act of 1832 authorized the first river improvement project. After that, work was performed periodically to protect the land from the ravages of floods. Dr. Austin Van der Slice (1975) discusses the situation in Yell County, Arkansas, since the last century:

> Flood control began in 1853 with the erecting of a series of levees. In the period 1866-70, the carpetbaggers who owned valuable land in Cardens Bottoms made more determined efforts to stop the flooding. In 1909, Government engineers

> began studying methods to control the river. A lock and flood gate were established at Neeley about 1920. But nothing proved effective until the Multi-Purpose Project was completed in the early seventies. The rich bottomlands had been largely destroyed by that time.

Trauma-producing floods occurred in 1912, 1927, 1936-37 and 1943. In each instance, Congress responded with legislation for flood control. However, the exigencies and priorities of national concern precluded concerted action. It was only when the interests of proponents of flood control, navigation and hydroelectric power coincided that the necessary funds for an extensive river project were authorized by Congress. This was in 1946, when $1.2 billion was authorized for river improvements with reference to all three of the above. Construction took place from 1957 to 1970. By the latter date, 17 locks and dams, 2 lakes and other projects not only provided a measure of flood control but also made the river navigable from Little Rock to Tulsa. (See Table 1 and Figure 1).

The preceding cursory review of the locale, the people and the project ignores the social, political and economic forces at work during the period discussed. The human drama in response to the extremes of floods and droughts is not portrayed. Nor does the story tell of the fusion of the individuals and groups whose primary concern was flood control with those favoring the navigation system. Although there are excellent accounts of life within the region and the legislative history of the project in Leven and Read (1971) which fill in some of those gaps,

FIGURE 1: The Arkansas River Multiple-Purpose Navigation Project

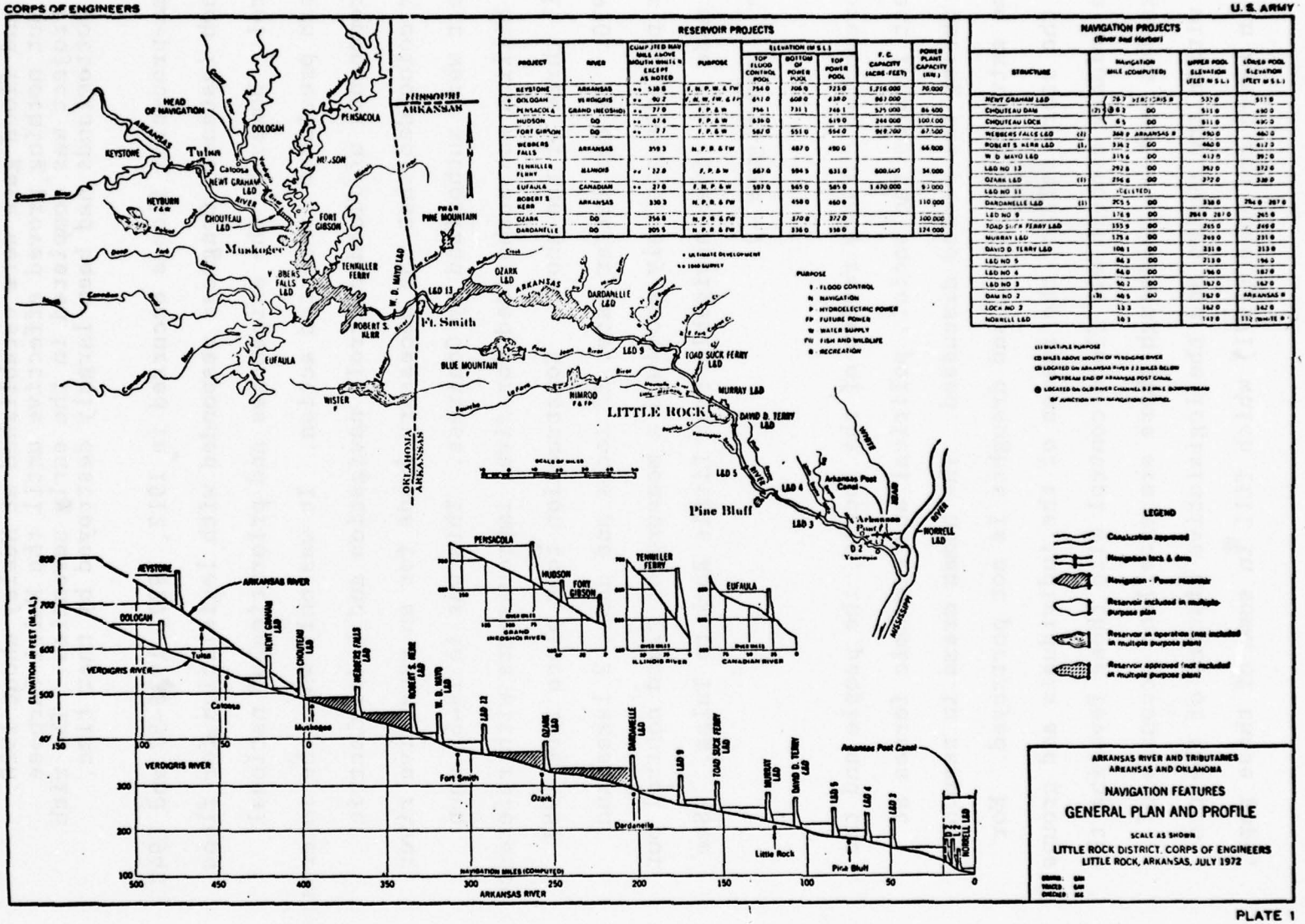

PLATE 1

TABLE 1. McClellan-Kerr Multiple Purpose Arkansas River Project in and near Sample Cities

	Lock & Dam N	Miles from City	Estimated Project Costs	Construction Date Started	Construction Date Completed
Dardanelle*	10	2 West	$83,000,000	1957	1969[1]
Ozark*	12	1 East	$83,000,000	1964	1969[2]
Sallisaw	15	8 South	$92,000,000	1964	1970[3]

*The project provided (a) navigation
(b) hydroelectric power
(c) controlled spillway
(d) powerhouse

[1]Power produced, 1965
[2]Power produced, 1973
[3]Robt. S. Kerr Lock and Dam

Source: U.S. Army Corps of Engineers Brochures, Little Rock & Tulsa Districts, Corps of Engineers, 1972 and 1973

much more must be learned to enhance understanding of the social impact of this project on the life of the region.

In order to provide more information about the communities qua communities within the Arkansas valley and to provide information applicable to the development of future projects with a view toward improving the quality of life, the research program discussed in the following pages was undertaken.

CHAPTER III. Researching a Research Strategy

Developing a Research Project. As already indicated, a major aim of this study is to develop a research strategy not only for further analysis of the social impacts of the MKP, but also for inclusion in formulating community profiles elsewhere. In addition, it would provide hitherto unutilized information relevant to further study of the MKP, ranging from public hearings on the River's problems to histories of small cities. To achieve these goals, an exploratory, diachronic study of several small cities located within eight miles of the river was undertaken. The major questions about the communities for which answers were sought, are listed on page 9.

The third question had to be investigated first, for without methodology for reconstructing the pre-project communities and detecting community responses, the differences between them can only be identified in terms of what meets the observer's eye, e.g., an influx of recreation users during summer months or the presence of a port. (Except for the previously cited Mannford study, no analysis of the impact of the MKP on small city life has been done). These and other facts of community life may be associated with numerous events taking place at the international, national and statewide levels - as well as locally - during the same time span. Therefore, it is neces-

in time in order to envision how waterway changes were related to other changes occurring at the same time. Methodologically, this procedure, by providing base-line information, is analogous to a "pre-test" in experimental design.

The Research Sites. Early in this venture, two important decisions had to be made. One dealt with the fact that the researcher was located in Washington, D.C., not in Arkansas or Oklahoma. This meant that the project would have to lend itself to such a geographical distance. The second decision dealt with the selection of sample cities. The first led to an early decision to rely heavily on secondary sources, i.e., analysis of information which has been collected and is available in some audio and/or visual form. From this the second decision followed logically: to select cities with populations of 2,500 to 5,000, large enough to have a newspaper. Newspapers and U.S. Census materials are two readily available resources. The Census provides information on cities of 2,500 or more. Newspapers yield information about community values, organizations and patterns of interaction.

The Advantages of Secondary Analysis. It was immediately recognized that these seemingly limiting factors might prove definitely advantageous for community profile construction because secondary data:

a. Are readily available.
b. Allow trend analysis:
c. Serve as a check on biased personal perceptions, particularly of past events;
d. Enable "with project" and "without project" analysis;
e. Preserve the privacy rights of individual respondents.

In addition, there is the potential usefulness of the resulting strategy to other social impact assessors faced with limited time, money and opportunities for interacting with the people of a community in which environmental changes are planned.

The Sample Cities. The communities selected for study were chosen from a listing of over 100 small towns and cities within an 8-mile radius of the Arkansas River. They met the above criteria of population size and publication of a (weekly) newspaper. They were also incorporated county seats and outside of SMSAs. The final selection consisted of Dardanelle and Ozark in Arkansas and Sallisaw in Oklahoma. These three cities provided comparable sources of data over the same time period. Cursory acquaintance with data suggested that they are very much alike. The similarities are indicated in Table 2, p 27, which shows a few of their social and topological characteristics. Parallels of their growth and that of their respective counties is shown in Table 3.

The Research Methodologies. Two approaches are characteristic in comparative analyses of communities. One is essentially quantitative, drawing heavily on data procured through census -

TABLE 2: Comparative Data: Dardanelle, Arkansas; Ozark, Arkansas; Sallisaw, Oklahoma.

	Dardanelle	Ozark	Sallisaw
Location	On river	On river	3 miles
Elevation	250'	450'	526'
County Area	933 sq. mi.	615 sq. mi.	697 sq. mi.
County Seat	Dardanelle Danville	Ozark Charleston	Sallisaw
Relative Size	Largest in County	Largest in County	Largest in County
Avrg. Temp.	62°	62°	61.2°
Rainfall	48.9"	45.14"	49"
Highways	U.S. 64 Ark 22 I-40	I-40; U.S.64; Ark 23	I-40; U.S.64 Ok 59
Railroads	Dardanelle-Russelville R.R. (across river)	Missouri-Pacific	Kansas City Southern; Missouri-Pacific
Weekly Newspaper	Dardanelle Post-Dispatch	Ozark Spectator	Sequoyah County Times; Eastern Oklahoma Tribune
Newspaper Circulation	3,500	3,084	7,000
Form of Government	Mayor; 7 Councilmen	Mayor; 7 Councilmen	Mayor; 4 Councilmen City Manager

TABLE 3: Populations of Sample Cities and Counties, 1890 - 1970*

	1890	1900	1910	1920	1930	1940	1950	1960	1970
Dardanelle	1,456	1,602	1,757	1,835	1,832	1,807	1,772	2,098	3,297
% Change		- 10.2	9.7	4.4	0.0	- 1.4	-1.9	18.4	57.1
Ozark	862	848	1,146	1,262	1,564	1,402	1,757	1,965	2,592
% Change		- 1.6	35.1	10.1	23.9	-10.4	25.1	11.8	31.9
Sallisaw	-----	-----	2,479	2,255	1,785	2,140	2,885	3,351	4,888
% Change	-----	-----	-----	- 9.0	-20.8	19.9	34.8	16.2	45.9
Yell County	18,015	22,750	26,323	25,655	21,313	21,000	14,057	11,940	14,208
% Change		26.3	15.7	- 2.5	- 16.9	- 1.5	- 33.1	- 15.1	19.0
Franklin County	19,934	17,395	20,638	19,364	15,762	15,680	12,358	10,213	11,301
% Change		- 12.7	18.6	- 6.2	- 26.0	- .5	- 21.1	- 17.4	10.7
Sequoyah County		(State-hood - 1907)	25,005	26,786	19,505	23,138	19,773	18,001	23,370
% Change			11.1	7.1	- 27.2	18.6	- 14.5	- 9.0	29.8

* Source: U.S. Census, 1910, 1930, 1970.
W. A. Heffelfinger, Appendix, 1974
W. N. Peach and R. W. Poole, 1965

type materials and/or responses to pre-coded questionnaires distributed to sample populations. The other approach is qualitative, in which the researcher, after "restructuring" communities by piecing together materials drawn from a variety of documents ranging from medical reports, for example, to "oral histories" (tape recordings of individual responses to broad questions posed by an interviewer), discerns relationships and their patterning. Usually, researchers select only one of these approaches when conducting a specific study.

Either of these approaches may rely on a variety of techniques for the procurement of data. Sometimes the terms "quantitative" and "qualitative" are used as prefixes of either "methodologies" or "techniques". Other researchers hold "methodologies" and "techniques" to be synonyms. The perspective of this report is that the method used is qualitative: This study is intended to sensitize researchers and others to the multiple interacting factors, persons and ideas that constitute city life.
To reflect the city's processes and structures, an objective research approach is needed. The techniques use quantifiable data for descriptive purposes and qualitative information, e.g., newspaper stories, quantitatively in order to provide pictures of the Sample Cities.

Norman K. Denzin refers to the integration of methodologies as a "triangulation of methods":

> "...because each method reveals different aspects of empirical reality, multiple methods of observation must be employed. This is termed triangulation and I now offer as a final methodological rule the principle that multiple methods must be used in every investigation, since no method is ever free of rival causal factors, (and thus seldom leads to completely sound causal propositions),... or can ever completely reveal all of the relevant features of empirical reality necessary for a theory's test or development..."
>
> "...My last criterion under the category of validity, then, is the triangulation of methodologies. This proposes a new line of action for the sociologist...The combination of multiple methods - each with their own biases, true - into a single investigation will better enable the sociologist to forge valid propositions that carefully consider relevant rival causal factors." (8, pp. 26, 27).

Denzin goes on to speak of the following four basic types of triangulation:

(a) Data sources, i.e., a variety of places, persons and times from which data can be collected.

(b) Investigators, i.e., have several qualified investigators conducting the study.

(c) Theory, i.e., a range of perspectives in relation to a specific set of objectives.

(d) Methodology, i.e., participant observation, surveys, life histories and the like.

The Research Assumptions.

When undertaking an exploratory study, a social scientist does not start with hypotheses or variables. Rather, his goal is to develop them as his research progresses. However, as a professional scholar, he is likely to have basic assumptions about the nature of humans and group life. The very way in which he views the subject of his study is colored by his perspective. In order to understand the approach developed - and possible biases it may introduce - I feel obliged to state several underlying considerations permeating the entire orientation of this project. In each case, the broad assumption is cited and its applicability to water resources is underscored.

1. Community life is an ever-evolving, continuous process of personal interactions which are cooperative and conflicting.

   The Sample Cities are continuously undergoing changes through the daily contacts between people wherein they cooperate and disagree.

2. Past is prologue. Because of the evolutionary nature of life, the present can be understood only by understanding its roots in the past.

   Each of the Sample Cities must be understood in terms of its unique history.

3. Any given individual or group may "see" a situation and evaluate it differently at one point in time from another.

   Individual and/or group responses to the Arkansas River vary over time both in terms of how it is perceived and how it is evaluated as "good" or "bad".

4. What is "good" for the individual may be "bad" for the group and vice versa.

   What a Sample City may need in order to protect itself against flooding may require sacrifices on the part of any given individual. Correspondingly, flood control may enable an individual to profit, but taxes may go up for the whole community.

5. All parts of community life act upon one another and are interdependent.

   All phases of life in a Sample City are interdependent. What happens along the waterway, for example, affects all other aspects of the community's life.

6. An individual or a community may not be able to perceive the interrelationship of the parts constituting the whole.

   Sample City residents may not be aware of the impacts of the waterway itself or of the waterway through its relationship with other facets of community life.

7. Every city or community has an image which is reinforced by spokespersons for the community - voluntary associations, newspapers, visible leaders. To the extent that this image is seemingly shared by the residents, there is an appearance of community cohesion. Therefore, community cohesion may be manifested in the activities of clubs and conflicting interest groups demanding referendums.

   The responses of cities to the water project may be manifestation of community cohesion that already exists in the city or they may stimulate cohesion.

These assumptions are particularly relevant to the nature of the research strategy developed. For example, since research is a continuous process, the act of researching may have an impact on the subjects as well as on the researcher. As the

latter's work progresses, he realizes what might yet be done as well as what might have been omitted. Moreover, the researchers past experiences color his selection of methodologies and techniques. Additionally, of course, any two researchers might "see" and evaluate the subject of study differently, just as any two interview respondents might "hear" the same question differently. Approaches, techniques, findings, time and fund expenditures and the like might be perceived by the researcher very differently from the supporting organization or the subjects of the sample. Public disclosure of their lifeways may be viewed approvingly or ominously by the worker or the subjects. Finally, of course, the researcher and the subjects bring their own biases into the situation, biases of which neither may be aware.

The Research Process

While making the selection of the Sample Cities, the search for available resources was undertaken. Having the advantage of a Washington, D.C. location, it was possible to use the Library of Congress, the National Archives, the Department of Agriculture facilities, as well as the Department of the Army Library and the local universities. The Oklahoma and Arkansas Historical Associations and the U.S. Army Corps of Engineers Tulsa and Little Rock District Offices proved most helpful, too. On the basis of extensive preliminary surveying of available data,

four major data resources were selected in order to obtain uniform information on the three cities:

a. Dun and Bradstreet Reference Books
b. The weekly newspapers of the 3 Sample Cities
c. The U.S. Census
d. Public Hearings on the MKP

The years 1940, 1950, 1960 and 1970 were chosen for sampling with concentration being placed on the last three years, because of the greater accessibility of comparable data. Interstingly, it appears in retrospect that a four-stage analytic procedure evolved gradually. This is discussed in the following section and presented in Figure 2 which details the sequence of activities engaged in by four researchers.

An Evolutionary Approach to a Research Strategy: Initial Thesis. This study started with far-ranging, random exploration in search of information on the region and also on available resources. Newspapers, historical information and census data were selected and obtained. Intensive perusal and study followed which suggested that there were similarities between the Sample Cities, but it also became apparent that their past histories, the nature of the interactions of the townspeople and the relations of the Sample City people to their neighbors, varied.

Each city appeared to be a "social world" with a distinctive "social climate". Each is a community where it is presumed that people think of themselves as sharing common experiences and artifacts and make sense out of them in more or less the

Figure 2: SEQUENTIAL DEVELOPMENT OF METHODOLOGIES FOR COMPARATIVE DIACHRONIC CASE STUDIES

PHASE	I	II	III	IV
RESEARCH ACTIVITY	Orientation & Development	Application & Feasibility Testing	Adaptation & Data Collection	Integration & Interpretation
	Problem and Research Plan. Conceptualization; Resource identification and procurement; Technique and instrument formulation.	Refinement of techniques	Data collection; Analysis of individual case studies.	Integrative analysis of collected data unitemporally and diachronically; Interpretation; Reportage.
FOCAL SAMPLE CITY (CITIES)	Dardanelle, Ark.	Ozark, Ark.	Sallisaw, Okla.	Dardanelle Ozark Sallisaw
ARCHIVAL RESOURCES	Newspapers(M)* Dun & Bradstreet U.S. Census, 1940-70; Records of U.S. Public Hearings on Ark. River Projects; Histories Economic & other reports	Newspapers(M) Dun & Bradstreet U.S. Census Records, etc.	Newspapers(M) Dun & Bradstreet U.S. Census Records, etc.	Newspapers(M) Dun & Bradstreet U.S.Census Records, etc Histories Economic & other reports

* (M) - microfilm

same way. People, activities, technological innovations and the like get sifted, sorted, tempered and rejected or accepted within the framework of a city's social climate. In turn, these very processes of mediating serve to perpetuate and modify a city's climate. In other words, the nature of the impact a proposed change may have on a community is dependent upon the history of the social relationships and social structure within the community. Even if a proposed environmental change were to be rejected, it may have an impact on the social climate because of the intensification of social relations while the issue was being decided. If this hunch were borne out in subsequent systematic and objective analysis, differential responses to the river might be understood. It followed that it would be necessary to develop techniques to answer questions such as these:

"What were the cities like during the past 30 years?"

"What were the similarities and differences between them?"

"How did they respond to the river?"

During this first phase, the decision was made to study Dardanelle, Arkansas intensively and to develop research techniques during this case study which could then be applied to the other Sample Cities. For historical information, researchers used the Arkansas Historical Association and the Arkansas Historical Quarterly. A local historian's History of Yell County (Banks, 1959), provided informative background material. Reports of the Ozark Regional Development Commission, the Office of Economic Opportunity and the U.S. Department of Agriculture exemplify

some of the diverse resources used. Such data sources acquainted the researchers with the community and gave them insights into its living patterns and social structures since its founding in 1830. Unfortunately, information on Dardanelle specifically was frequently incidental in these accounts. Therefore, they did not lend themselves to the desired kind of systematic data collection.

Resources. The U.S. Census, the Dun and Bradstreet Reference Books, the Dardanelle Post Dispatch and the Public Hearings conducted by the U.S.A.C.E. showed promise of lending themselves to objective analysis and comparison. Figure 3 indicates the resources used and the type of content offered. They are discussed in detail in the following paragraphs.

Newspapers. The Dardanelle Post Dispatch, published weekly, traces its history to the middle of the last century. The names of one man and of one or both of his sons dominated its masthead for approximately fifty years. However, the paper changed hands three times between 1952 and 1970. In addition to the 24 issues selected for the sample, careful reading of many other issues of the paper was undertaken. This led to two modes of analysis:

a. Careful reading of the newspapers in order to form pictures of Dardanelle life styles during the different decades and seasons.
b. Quantification of frequency with which persons, places, institutions and other contents of the paper appeared.

Figure 3. MAJOR DATA SOURCES

I. WEEKLY NEWSPAPERS:*

A. DARDANELLE POST DISPATCH (Dardanelle, Arkansas)

1950)
1960) January & July: first & second weeks
1970) June and December: third & fourth weeks

B. SEQUOYAH COUNTY TIMES (Sallisaw, Oklahoma)

1950)
1960) January & July: first & second weeks
1970) June & December: third & fourth weeks

C. OZARK DEMOCRAT ENTERPRISE (Ozark, Arkansas)

1950) January & July: first & second weeks
June & December: third and fourth weeks

D. OZARK SPECTATOR

1960) January & July: first and second weeks
June and December: third & fourth weeks

1970) July: first & second weeks
June & December: third & fourth weeks

1971) January: first & second weeks

II. U.S. CENSUS: 1940, 1950, 1960, 1970

1. General population characteristics: Total, sex, age, race.
2. Detailed characteristics: 1970 only.

III. DUN AND BRADSTREET REFERENCE BOOKS, 1940, 1950, 1960, 1965, 1970

1. Number of firms by decade
2. Names of firms
3. Recommended credit rating
4. Local and branch firms
5. Types of business (e.g. groceries, manufacturing)
6. Composite credit appraisal

IV. PUBLIC HEARINGS and LETTERS: 1929 - 1969

1. Locations
2. Issues and arguments (pros and cons)
3. Participants (Individuals and sponsoring organizations)
4. Decisions

*Initially, microfilm issues covering 1943-1948 were examined.

The latter developed from the insights derived from the qualitative approach. The careful perusal of the newspapers suggested the major areas of life which seemed to be of concern to the community. The names of individuals and organizations, the contents of the ads, the social, political and economic issues discussed (and their repetitiveness) indicated that sociological concepts were applicable. Stories and ads could be categorized and developments along the river could be noted. The following page provides a sampling of the categories used.

The major headings were "Local" or Sample City, "Locality" or non-Sample City and "Ads." News items were tallied in appropriate categories under these. Anything written about persons, places and activities within the city was listed under "local." When the bulk of a paper is devoted to coverage of city life and local people, we may assume that the population shares common concerns, recognizes the community members as leaders, identified with neighbors and circumscribes the world within its boundaries. When, on the other hand, a paper is filled with news of the larger society - state, national and international news - we could safely assume that the readership was cosmopolitan, sharing the concerns of the world. Such a community would surely respond to the planning for the MKP differently from one whose social climate was locally oriented.

Figure 4: SELECTED SAMPLE CATEGORIES FOR NEWSPAPER CONTENT ANALYSIS

I. LOCAL

A. Personally-oriented stories
1. Individual participation outside Sample City
2. Vital statistics

B. Organizations
1. Internal organizational activities
2. Notices, announcements of meetings
3. Joint meetings
4. External Club Activities
5. Inter-club activities

C. Social Problems
1. Crime
2. Poverty

D. Community Development
1. Long-term services
2. Arkansas River developments

E. Social Institutions
1. Economic
2. Political
3. Religious

II. LOCALITY OR NON-SAMPLE CITY STORIES

A. Locality
1. Personal incident items
2. Economic-agricultural

B. State

C. Outside - canned features

III. ADVERTISEMENTS

A. Local

B. Locality ads.

IV. PICTURES

However, one of the intriguing questions facing the social scientist is this: Where does a city begin or end? Implicit in it is the question of the network of associations which gives people a sense of identity and social solidarity. Long ago, human ecologists identified trade areas as indicators of social networks. However, since the advent of the auto, a trade area may be global for certain members of a city and limited to a block for others, who may be the lonely isolates in the city, despite the suggestive neighborliness of shopping locally.

Since the cities under study were relatively small ones, it was felt that the communities activities supplying news to the paper about their residents might be considered an integral part of the life of the city itself. Therefore, a record was made of community names and of the amount of space devoted to news items about neighboring communities. Apparently someone in these outlying towns and villages provided the news of the "locality" people to the Sample City newspaper. (In the earlier decades, these communications seem to have been printed in the same words which were sent to the paper). Based on the same assumption, the ads were also classified in terms of locus of origin. Ads placed by Dardanelle persons or organizations were separated from those of neighboring community or national origin.

It was anticipated that this type of analysis would make it possible to observe the pattern of city life as it appeared at any given point in time and as it changed over the decades. Further, the technique of analysis could be used on the other communities in the study and comparisons could then be made.

Public Hearings. Public hearings have traditionally served as a link between the citizenry and federal agencies. The stated purposes of the hearings held by the Corps of Engineers on the projected work on the Arkansas River were trifold: The Corps wanted information necessary for planning or decision-making. It wanted the public to know about proposed or on-going Corps projects. It also wanted to allow local interests to state their needs and express their views on projects proposed, planned or in progress.

The researcher assumed, given these aims, that the hearings would provide an arena where the interaction between various individuals and organized interest groups could be observed. To the extent that the Sample Cities were included in these situations, insights into the nature of the social climate could be gleaned. If the information in these hearings were to provide evidence of community reaction to the proposed river improvements, there might be indications of the impact of the potential or actual river changes on the Sample Cities. Any objective techniques for assessing these impacts and/or evaluating them, could be tested in this and other situations.

It was difficult to obtain information about public hearings and then to obtain the transcripts themselves. A first step was examination of the Congressional Record Index from the 1940's into the mid-60's (approximately from the 78th through the 90th Congress). Other sources cited in the Index were obtained and they, in turn, suggested additional ones. Although scripts of hearings were the most accurate and complete source of information, even they varied in quality and quantity. (The information located and used cannot be considered more than a sample of the holding and contents of public hearings. The total number has not been determined.)

The hearing bodies were Congressional committees and subcommittees, Corps of Engineers boards, district offices and other staff. Of the 23 hearings which took place in Oklahoma and Arkansas, 20 were held by the Corps. Altogether, 25 hearings were held, 10 in Arkansas, 13 in Oklahoma and 2 in Washington, D.C. The schema used for analyzing the contents of the hearings invoved the following:

a. Date and location of the hearing
b. Identity of the hearing body
c. Purpose of the meeting
d. Interests represented, e.g., utility companies and names and other identifying information about persons representing those interests
e. Pro and con arguments presented

The hearings provided little information about the Sample Cities. This may be attributed to the limited number of hearings found, to the limited role Sample City people played in them,

or to incompleteness of records retained over the decades. However, the study of these documents was valuable in terms of the historical insights provided and whatever information about the Sample Cities they did include. (Appendix B, Table B-1)

The researchers were fortunate in obtaining another source: Letters submitted by "local interests" to the Corps "regarding their willingness to meet regulations of local cooperation as prescribed by the law." These letters were analyzed in terms of writer, clarity and type of commentaries and project discussed. The letters provided limited data, but did identify certain of the Sample Cities' leaders and interests.

Although the public hearings and the letters were incomplete sources of data for this project, they proved to be of great value. In the first place, they provided accounts of the nature of the interaction between interested parties in the region. This interaction between a spectrum of economic interest groups vis-á-vis small cities was a source of insights into the decision-making processes. Secondly, they indicated several of the Sample City representatives and the kinds of arguments they presented on behalf of their small cities. And, finally, they recorded the history of the project as an evolutionary process of social interactions occurring over a long period of time.

U.S. Census Data. These are always considered basic to social science studies. The publication of population characteristics every ten years provides an unobtrusive measure of the organization of a city which can be followed through time. During this first phase of the study, the decision was made to obtain as much information as possible on total populations of Sample Cities, labor force characteristics, race, sex, age distributions and mobility within the preceding five-year period. Because information on cities with populations under 2,500 is limited, only selective characteristics were available on Dardanelle and Ozark prior to 1970. However, these data not only made it possible to develop a picture of each of the Sample Cities from the beginning but also proved to be of great value in Phase IV.

Dun and Bradstreet Reference Books. They have been serving the business community since the 1800's, collecting information on the fiscal reliability of various business firms in many towns and cities throughout the U.S. The listings and ratings are carried out uniformly every year and give a picture of the recommended credit limits of small to very large enterprises. The name of each business is classified by type, date within each decade it was established or came under current control or management, estimated financial strength and a composite credit appraisal ranging from "high" to "limited". This was found to be more informative than the U.S. Census of Business, Manufacturing and Agriculture, or volumes of Standard & Poore. A sample page is in Appendix C.

The ratings for business establishments in Dardanelle, Ozark and Sallisaw were obtained for the years 1940, 1950, 1960, 1970 and 1974. The information for every rated firm was analyzed in terms of median credit ratings, longevity and type of business. It was possible to distinguish locally-owned firms from branches of in-state and out-of-state companies. The relationship of these data and their analysis to the social impact study is based on postulating that:

1. Dun and Bradstreet gives a reasonably accurate record of the financial strength of a business through its credit ratings.

2. The size of the recommended credit limit is an accurate indication of the size and strength of the business unit.

3. The size and strength of the unit are major factors determining the manner in which it is operated and the nature of the relationship between employees and management.

    a. Large companies tend to be more bureaucratic; relationships with employees are more impersonal and based on efficiency and salary reward.

    b. This is based on the assumption that an out-of-Sample City business with over $500,000 recommended credit limit, has different attributes from a small, home-based corporation.

4. Differences in the number of home-based and branch businesses are indicative of whether a city and its population have a local or cosmopolitan orientation.

5. Differences in the number of home-based or branch businesses provide an indication of the city's receptivity to outside groups or organizations.

Thus, Dun and Bradstreet information appeared to be worthy of close study because it would reveal the changes in the basic economic organization of each city over a long period of time. Business openings and closings, "successes" and "failures," as evidenced in increasing and decreasing recommended credit limits, could be observed as they paralleled the development and construction of the MKP.

During this initial period of research, then, Dun and Bradstreet materials were acquired, foci of attention were identified and sample shells formulated.

Summary of Phase I. This was a period of broad exploration and intensive concentration simultaneous. In-depth study of the area and later of the counties and communities selected, led to the over-all strategy to be developed and tested. The decision was made to conduct diachronic, comparative case studies using unobtrusive measures.

Phases II, III, and IV: As stated earlier, it is primarily in retrospect that identifiable "stages" may be discerned from the continuous evolvement of the strategies of this research project. The major disjunctions were in the attention given to the Sample Cities. Dardanelle was the initial one selected and used for intensive study almost throughout the entire project. As the second city, Ozark did not receive as much attention in terms of the qualitative analysis of the newspaper contents as did Dardanelle. Sallisaw was treated as the sample city to which the refined research instruments would be applied. (The assumption was that if information of value could be obtained using the unobtrusive measures devised, then the research tools could be applied elsewhere by persons other than the developers).

Each of the successive stages of the project was directed toward further development of the research strategy while accumulating a body of information about each of the communities. Varying degrees of responsibility for using a given data resource were allotted to each of the four participants in the project. In addition, each one did some work with at least two of the techniques. This division of labor, whereby one person was more or less responsible for the newspaper

methodology, another for the Dun and Bradstreet data, and so on, with the principal investigator originating, working with the data, and directing the work, had several advantages:

1. Each specialist acquired intimate knowledge of the data for which he was responsible.

2. The analysis instruments were tried out by persons with varying familiarity with them, so that their shortcomings were detected by an "outsider's" perceptions.

3. The techniques could be used by persons with minimal training in their usage.

4. Each researcher, working independently of the others, was in a position to summarize his data in terms of the major goals of the study. This would help in assessing the value of any one of these indicator sources to community profiles and measuring MKP impacts.

As shown in Figure 2, the second phase was one of refining the instruments and workaday problems associated with data assembling and handling. One person was primarily responsible for the content analysis of the Ozark paper, using the instrument developed in connection with the analysis of issues of the Dardanelle Post Dispatch. The schema developed in Phase I for analyzing the public hearings and letters were applied. Familiarity with the contents of Dun and Bradstreet led to combining

and arranging the data it contained. The Census data were used as points of reference at this stage. A researcher with little familiarity with the project was brought in to learn how to use the Content Analysis Instrument and Dun and Bradstreet information. This, then, was a time for trying out, testing, refining, and retesting, with most of the effort being expended by two of the researchers.

During Phase III, attention was turned to Sallisaw as a "test case" for applying the developed methodologies. Since the researchers knew little about Sallisaw, it could serve as a proving ground. How well would the research tools developed on the basis of the other cities work in extracting insights into the organization and interactions in this city? What kinds of hunches about social impacts and social indicators would the application of the techniques by someone relatively unacquainted with the aims of the research lead to? How would the findings about Sallisaw compare with those of Dardanelle and Ozark?

Essentially, Phase IV involved comparison of the information gained from the three Sample Cities, using each of the sources and analytic tools devised. Phase IV also included the integration of the materials and inductive analysis in order to determine whether useful indicators for a research strategy for social impact assessment were derivable. The integrative process was facilitated by the four researchers holding a one-day seminar to exchange individual contributions.

SUMMARY OF THE RESEARCH ACT

The aim of the chapter on the study of the differential responses of small cities to the MKP has been to trace the process of development of a sociological endeavor designed to meet a specific goal: the development of a research strategy which would contribute to social impacts assessment. The endeavor was exploratory, guided by a series of assumptions based on grounding in sociological theory. Although content analysis is a widely known, well-established technique for sociological analysis, particularly of communications, it is seldom used in community study. Therefore, it was necessary to create a research instrument to meet the needs of this particular project.

A second resource, U.S. Census data, is the most widely used resource both in community and social assessment studies. By and large, its items are the generally used social indicators of the quality of life in America. In this study, the Census data have been used in the early stages to obtain a demographic picture of each city and in the fourth stage in relation to other techniques. Although Dun and Bradstreet Reference Books have been published for over a century, social scientists rarely utilize this resource. It has proven of greatest value in the effort to

trace economic changes over the decades, as well as the relationship between locally-owned businesses and others. Finally, the public hearings conducted by the Corps and Congressional Committees over a long period of time help to trace the relationship between small cities and the larger society in relationship to issue resolution and technological change.

Recommendations for a Research Strategy

By utilizing the preceding resources and techniques, a great deal of data about each of the Sample Cities were acquired. Careful analysis of these data led to the realization that the initial thesis, that the social climate of a community rooted in its history has an important bearing on its responses to change, appeared to be borne out. Although the communities bore many similarities, it was possible to isolate distinguishing features for which a rationale could be formulated. It became apparent that an appropriate strategy for future impact assessment should involve the identification of its social climate and an assessment of how the community might react to change on that basis. As a facilitator in this direction, it is proposed that a typology of cities be formulated, composed of community profiles. Then the assessor would have cues as to what to look for in studying a city. Next, he could identify whether the city was more appropriately one type or another. On this basis he would be aided in answering such questions as, "at a given point in time, given the similarities of the city to one

of the types of community proposed, how might the city respond to a project?" Or, "would this city make any response?"

In Chapter IV, a typology of community profiles, derived from the inductive analysis of the data on the three Sample Cities is presented. It is introduced by an explanation of its potential usefulness. This is followed by vignettes depicting two types of cities: the autonomous and the open. Then a number of specific indicators, providing a community profile of each type, are presented. Chapter V, again relying heavily upon the data drawn from the three Sample Cities, offers a series of scenarios detailing the kinds of future orientations a given city may have. The concluding comments suggest the implications of the study for further social impact assessment.

CHAPTER IV THE COMMUNITY PROFILE TYPOLOGY

The aim of this research project is to formulate a strategy for social impact assessment of the MKP. In the process of doing so, base-line information about several communities along the Arkansas River was collected. In the preceding pages, the methods for accumulating such data were reported. In the following pages, the strategy which is recommended for future social impact assessment will be detailed. Supportive evidence based on the research undertaken will be presented in the text or in the Appendixes.

A Proposal for Impact Assessment

Importance of Small City Analysis: In 1970, approximately 8,000,000 (3 percent of the U.S. population) lived in cities numbering fewer than 5,000 people. Nevertheless, the country is dotted with thousands of little cities. There are several hundreds of them in the 26 counties bordering the river. However, the small city in the Arkansas River basin area, while of utmost importance to its residents, is a phenomenon that, in terms of national and international survival - or even in terms of the two states in which the MKP has been constructed - tends to be viewed as the proverbial needle in the haystack. And yet,increasingly, urbanologists speak of "cultural pluralism," in recognition of the persistence of communities within

the city. The city is a composite of neighborhoods, community participation and unmeltable ethnics. The awareness that a city or an urban community or an SMSA is in reality a conglomeration of smaller cities, smaller networks of people, many of which are very distinctive, makes it plausible and important to study the small city as a possible prototype of urban neighborhoods. Further, it is a place where it is easier for a researcher to identify factors and develop hunches that would be hidden in a complex metropolis. For these reasons, the following has significance beyond the confines of communities with populations under 5000 and locations on major river arteries. (For this report, "community" and "city" will be used interchangeably.)

The necessary step toward assessing impacts: The basic proposal to facilitate acquiring needed information for future work in social impact assessment is to develop a typology of communities. The usual procedures for classifying cities on the basis of size is subject to question. As initial suggestions of what may ultimately lead to 5 or 500 diverse types, the following two are proposed: the open community and the autonomous community. Neither is intended to depict any actual, individual city. They are constructs based on inductive analysis of empirical data, designed to point out dimensions of city life which should be considered (a) when planning a project in order to anticipate scenarios of likely responses, and (b) when assessing the impact of any completed project on life in its environs. These constructs are not applicable in toto to each of the

three communities studies in Arkansas and Oklahoma. They provide guidelines for constructing a community profile in an effort to assess social impacts.

What is the Value of a Typology in the Planning Stage of a River Project? First, the items in the typology would serve as social indicators to aid the researcher in identifying the type of city he is studying, i.e., open or autonomous. This would put him in a position to select effective ways of reaching and involving the community in the project development. He is likely to have a better understanding of how the project would affect the social relationships in the community. A historical perspective would make the researcher aware of the social forces in action which may have a bearing on the life of the total community. Such knowledge would make more meaningful any other techniques he may wish to use, e.g., an attitude survey.

What is the Value of a Typology after River Project Completion? By knowing what the characteristics of a given small city are, the assessor can perceive changes in which the waterway played a part. Even more likely, he may see why little advantage was taken of opportunities for the waterway to play a significant part in the life of the community. Understanding the nature of a given city may enable the investigator to determine the community's responses to the MKP as similar or different from its responses to other agents of change, and

then define those differences or similarities. Most importantly, this approach should be of value in increasing our knowledge of variability in social impacts within a given city over time. Such knowledge has implications for assessing who is affected, when, under what circumstances, and whether the social impact effect is defined variably over time (i.e., whether at one point in time the project is deemed negative by people who later redefine their reactions to it).

The value of a typology will become clear from descriptions of the types in general terms. These will be followed by a listing of indicators.

The Autonomous Community

Community Image: The autonomous community conveys an image of pride in itself. This pride stems from a history of successes, if not at present, in earlier times. In one way or another, through warfare or trade, its existence has been recognized as important in the past. Since then, its importance is recognized among those neighboring communities which have maintained close contact with it through generations.

The Booster Spirit: This sense of community is consciously promoted by the city's leadership, many of whom can trace their ancestries in the city, county or state. These

leaders are small, local entrepreneurs and their families, who identify their own personal interest with the interests of the city: "What is good for the city, is good for the local businessman; and what is good for him, is good for the city." To them, the city and surrounding county are "home" and family. To support each other means to support one's kinfolk. In such communities, it takes time for "newcomers" to win acceptance, but it is possible through active participation in organizations.

Voluntary Organizations: Formal organizations, like the Chamber of Commerce and church groups, serve to bring together people who already know each other well. The membership lists for a number of clubs are highly repetitive. The same people interact repeatedly in all these activities. Thus, family, friend, and city ties are reinforced. The newspapers affirm the importance of the activities of these organizations, such as partying, house painting, and travels. They legitimize the activities through printing them. Thus, the participants speak for the city.

Gatekeepers: Voices tend to be loud when the leadership deems something important. For example, if there is a move for a new industry to come into the city, the group mobilizes to encourage or discourage it, mustering its membership, funds, spokespersons and know-how for causes it wishes to support or defeat.

These people are the "gatekeepers" of the city, guarding its (and, by definition) their interests, admitting what they perceive as beneficial and shutting the gates on what they perceive as detrimental. It should be understood that they do not resist change per se; rather, they welcome it on their terms. As business people, they want to boost their city, and boosting means growth, but under their planning and control.

Social Control: Naturally, only some residents of the city under 5,000 population are part of the leadership circle. The majority undoubtedly are people who move in other groups. Unless they have jobs and earnings, they cannot do what the boosters urge: "Spend your money where you make it!"

Therefore, the leaders, acting in the name of the Chamber of Commerce, the Jaycees, Jaycettes and kindred organizations, try to attract industry, set the terms of its entry, and plan the community for themselves and their children. In so doing, they not only select, through direct and indirect methods, who may come and under what conditions, but also who should stay. (Not too long ago, it was found that a decade after high school graduation, only fewer than 20% remained in a Sample City.) Those who stay outside the leadership circle work at blue-collar jobs and struggle to survive even during periods of national prosperity. (It cannot be forgotten that one of the reasons firms enter the small town is cheap labor. Therefore, incomes, even when wives are employed, tend to be lower than national averages.)

Government and Policies: The people in the autonomous city are not averse to the federal dollar. Since the Great Depression, some of them have been recipients of government support. First, it was the rural poor, now it is the urbanites. With public support come public officials. Therefore, the autonomous city becomes the home of a number of federal employees. Obviously, the gatekeepers took advantage of opportunities offered by grants and subsidies.

State and local government workers constitute a smaller percentage of such workers and also of the total labor force than certain other occupational categories. Local politicians and politics during most of the period covered did not appear to play too important a role in the community, at least as evidenced by the sources of information used in this study. The close tie-in between the organizational leadership and the offices of mayor, council member and sheriff fused the identities of governing groups. And, with two exceptions, the autonomous city is minimally involved with the political arena of the larger society. One exception is the periodic visits by candidates for office outside of the city; the other, and more crucial one, is when the gatekeepers define a local concern or a national policy as important to their own way of life. Thus, they played an active part in efforts to get the MKP and later to get HUD funds.

Intermeshing of Social Institutions: In the autonomous city, social institutions vital to the community are blurred. This was exemplified in the Sample City. Many years ago, the city bought industrial land and buildings and leased them to a non-local firm. This public ownership was considered essential to keeping industry in the community and assuring that the city would be protected by a tax imposed on the citizenry, if the given industry pulled out. (The industry is still in the city).

The Other Half: Obviously, the businessmen leadership group does not constitute the population of the entire community. A sizable number are unemployed or living below the poverty level. There is a small number of minority group members. It is quite obvious from newspaper analysis that organizations like those promoted by agriculturalists or certain of the churches, attract different constituencies. Surely, these other population groups have dissimilar relationships with the city's services and activities. But since this type of city has been , and still is, a relatively small city, it is highly probable that the networks of relationships permeating the various groupings identifiable from data sources, prevail among unidentified persons with alternative life styles.

Yet, it should be remembered that it is the community qua community, the forest rather than the trees, which this typo-

logy concentrates on. As such, in order to assess the impact of the navigation system on the total community, factors that appear basic to its survival and overall adaptation have been extracted from available sources of data. Inductive analysis of these data sources pointed to the significance of the identity and the role of decision-makers, of the basic economic structure, and of aggregate population changes.

Pivotal Life Interests: Not all activities are significant in the same way. Some are simply not discussed because they are taken for granted. Or, it may be that a given activity becomes central only when the leadership sees it as vital in promoting community goals. Thus, in the autonomous city, as an abstraction of reality, education does not play a prominent role. (It is not a big employer, nor do the available jobs require degrees). It is not necessary to use the school as a means for bringing people together as a place where the paths of the local citizenry cross at PTA's and athletic events. Spectator recreational events do not appear to be a focal point of community identity. Cultural activities are club-based. The family, friends and organizations (whether religious or other), economic life and the city in toto, constitute the pivotal life interests of the autonomous community.

Social Change in the Autonomous Community

Timing is crucial: In the course of generations, this type of city experiences periods of relative "success" and prosperity

depending upon the combination of the historical moment and the presence of people who are able to utilize this advantage to their fullest benefit. Through the combined factors of location and type of settler, the community goes through periods of gaining and losing population and position. As long as leadership core persists, it will serve to initiate and respond, selectively, to changing situations. Having a business orientation, the core will promote the growth of the city so that its own membership may gain. It will encourage new industries accompanied by new personnel, insofar as it is able to control these in the light of its traditional perspectives and self-interests. This requires not only agreement among the leaders as to approaches, policies and inducements to be offered, but also the rallying of necessary community supportive services and facilities. There is always the possibility of misjudgements - overly zealous pursuit of self-interest, (presumed community interest), or inability to compete with, or resist, others, because of geographic, labor or other constraints. (This was illustrated in one of the Sample Cities, when it proceeded to develop the city in anticipation of a transportation system which was subsequently built in a neighboring city. This appears to have been a severe blow to the city and may have had much to do with its responsiveness to the MKP.)

The Dangers of Success: The very success the autonomous city may encounter, runs the risk of being a disadvantage to some

of its leaders and to the city as a whole. First, some business men are likely to gain more than others. Therefore, dissidence within the leadership group, coupled with the demise of leaders through death, retirement and mobility, may reduce cohesiveness. Second, the chances are that with success and years of experience, the native businessman does not need the support of the rest of the business community to the same extent. Being established, it may be that he and his cohorts do not maintain as tight a control over the city as they used to. Community changes will occur at an accelerated pace.

In summary, changes occur in the small city in response to deliberately sanctioned innovations, external forces beyond the control of the local community and the very processes of life associated with career development and aging

THE OPEN COMMUNITY

Small City Heritage: As successive waves of pioneers fanned across the continent, many settled in communities, struggling for a few years to eke out an existence, only to move on. Often, they finally located themselves in areas where farming was precarious, and the towns they became dependent upon were correspondingly precarious. There is evidence that some rural poor counties in Arkansas and Oklahoma lost population for decades. Interestingly, during and after the years of the Great

Depression, these counties started to grow again, but people who could not continue living on the land were forced to move. It appears that nearby towns became the centers to which they migrated. They tried to set their roots there. Their struggle seems to be duplicated today by their descendants and others like them, who have been attracted to small communities in an effort to survive. They are the visible ones in the open city.

The Open City's Image: The size of the city does not seem to be a factor in differentiating it from the autonomous city; nor are there dramatic differences in the socio-economic position of its population. It is its image as a community, as a people with a particular kind of relationship to the place in which they live, that characterizes the open city.

Visibility of the Common Man: In the newspaper of the open city there is an abundance of names of individuals. Some appear in announcements of club meetings. Some are of young people who have distinguished themselves scholastically or in a school activity. Others are public officials associated with local or state governments. Social life is documented in the paper, and misfortunes are recorded. However, the information given about these people tends to be sketchy. In the open city, it is far easier to get a picture of family and kin of "common folk", especially from the news of outlying communities, than of the people who seem to be among the more

affluent or powerful. The city gives the impression of being run openly, of elected officials and other administrators making decisions and performing functions according to the official guidelines of the city; in short, of being "the people's city."

Openness to New and Varied Business and Industry: It appears that local people who find limited job opportunities within the community try their hand at opening a business. Outside companies, attracted by low tax rates and a readily available labor pool, also attempt to establish themselves in the city. Some of the major firms coming in may be in the energy field. They may produce hydroelectric power or natural gas. However, the open city does not specialize; businesses and industries are varied. Whether large or small, locally-owned or branches of state and national concerns, fewer than half of them are likely to survive a decade.

Employment: Despite the variety of business and industry coming to the open city, the labor participation rate is likely to be low. White-collar groups tend to be in the majority. There are few self-employed. This may be attributed to the fact that utility and power firms employ predominantly professional and managerial workers, as well as secretaries and clerks. Professionals and managers tend to be mentioned frequently in the papers.

The Newspaper as Image Reflector: Although business interests

are represented in the Chamber of Commerce, economic leaders are not identified as such in the activities of other clubs. As a matter of fact, most club news in the papers takes the form of announcements of meetings, rather than descriptions of what took place at the meeting and who attended.

The open city newspaper tends to cover a broad range of topics. Advertisements and pictures fill up a good part of the paper. Accidents and mishaps are fully reported. Educational activities-pictures of cheerleaders or award-winning students, coverage of PTA meetings, concern over new school building, and the like - are fully reported. The attention paid to school events may reflect, in part, the white-collar interests of members of the community. It may also be that the school brings together some of the people in the community. In this way, the open city reflects the suburban life, with families going their own way except for sharing a concern for their children's education and participation in the PTA.

SOCIAL CHANGE IN THE OPEN COMMUNITY

Small City with Big City Outlook: The open community presents an anomalous picture. It is a small city, yet it has attributes associated with large urban centers. The prime example is the invisibility of its leadership. If there are gatekeepers, they are well hidden. As for close-knit groups, they seem to be primarily limited to family or neighborhood and social enclaves.

The city is not likely to mobilize its forces to encourage or discourage change for the sake of community. The data suggest that this type of city might be described as one where at least half of the population is absorbed in its own daily life without trying to be actively involved in community affairs and without any group of leaders trying to involve others in support of one or another issue. As a matter of fact, the open city rarely shows any excitement about any issue. On some rare occasion, one might expect the opinions to be voiced in terms of resisting changes persons in official status positions recommend, because the change might erode vestiges of community cohesion. For instance, the installation of parking meters is likely to arouse a great deal of public reaction. (This actually was the case in one of the Sample Cities. The reaction was very vociferous from county people who objected to having to pay meters for their weekly Saturday outing to the city. The expense of this technological innovation was viewed as something that would interfere with sociability. There was an awareness that the parking meters would erode a sense of community that may have existed at an earlier time.)

The Impact of Industrial Mobility: Limited economic opportunities are a result of continuous in- and out-movement of businesses. Such changes are part of the community's way of life, so

that there must be constant adjustment and readjustment to the vagaries of enterprises. But all that is visible is the movement of individual firms and individual people. If there are changes in leadership or changes in the locus of power, they are difficult to detect. Community qua community continues - with the same degree of invisibility cited previously.

The Image of the Open Community: By and large, then, the open city is likely to experience innovation introduced by specific groups, individuals or organizations, whom the general population is unlikely to perceive. Laissez-faire capitalism here means that people do what they wish. It means that if changes are introduced, they and their impacts will not be publicized. Nor, for that matter, will the agent of change be public knowledge. Opportunities for development will be seized by entrepreneurs, if they perceive the situation as a beneficial opportunity. Moreover they are likely to be outsiders to the community.

Thus it is questionable whether the community can mobilize itself to take advantage of projects like the MKP. Individuals may succeed, but they will not be speaking for the community. They are not likely to identify themselves with the local people or have a sense of responsibility for their well-being. There is some suggestion that their personal identities are directed toward the state or region rather than to the city or county. They are likely only to advocate changes to the

extent that river modifications are perceived as enhancing their own interests.

Summary: The open city as an entity is amorphous. It has no walls and no visible gatekeepers. Its boundaries are loose. The leadership gives off the impression of being diffuse. It is a city in which individuals and groups may share space, but not identities.

In the following pages, a series of indicators for identifying the open city and the closed city are presented. The reader is reminded that these are intended as facilitators for identifying the historical and social factors likely to affect a community's response to natural and man-made events in its life.

Table 4: A CONSTRUCTED TYPOLOGY OF COMMUNITIES: Profiles

Indicators		The Autonomous Community	The Open Community
1. Location:	a.	Historically served as a major trade center at some time, without prominent towns or cities nearby.	a. Historically, a minor trade or service area; overshadowed by other towns or cities.
	b.	Presently or formerly surrounded by relatively prosperous agricultural area.	b. Surrounded by relatively poor area.
	c.	Long-standing, frequent ties with neighboring communities.	c. Loose ties with neighboring communities.
2. Economic Conditions:	a.	Rural-oriented businesses and industries.	a. Varied types of businesses and industries.
	b.	Emphasis on commerce	b. Emphasis on manufacturing and services
	c.	Predominantly home-based firms with proportionately higher credit to home-based firms than outside firms.	c. Predominantly home-based firms with proportionately higher credit to outside firms than to home-based firms.
	d.	Approximately half of credit-rated firms survive ten years.	d. Fewer than half of credit-rated companies survive ten years.
3. Labor Force:	a.	High labor force participation ratio; (Approx. 2/3 of 16-64 yr. olds in labor force).	a. Low labor force participation ratio; (Approx. 1/2 of 16-64 yr. olds in labor force).
	b.	High female labor participation rate.	b. Low female labor participation rate.
	c.	Employment in blue collar occupations predominates.	c. Employment in white collar occupations predominates.

Indicators		The Autonomous Community	The Open Community
	d.	Few government workers. Of these, most are Federal & state employees.	d. Many government workers. Of these, more employed by local government than federal or state.
	e.	Few professional & technical workers.	e. Many professional and technical workers.
	f.	Many self-employed	f. Few self-employed
	g.	Fewer than 20% of individuals in poverty.	g. More than 20% of individuals in poverty.
4. Economic Leadership:	a.	Essentially local, business-oriented leadership.	a. Local leadership composed of professionally-oriented people.
	b.	Business and organizational leadership conspicuously interconnected.	b. Business and organizational leadership distinctive.
	c.	Persistence of business elite over time.	c. Elite groups vary over time; difficult to perceive.
5. Population Characteristics:			
	a.	Population diversified in terms of mobility, race, birthplace and income.	a. Population homogeneous in terms of non-mobility, race, birthplace and income.
	b.	Economic and social stability.	b. Economic and social variations.
	c.	Preponderance of intact families.	c. Preponderance of partial families and single individuals.

Indicators	The Autonomous Community	The Open Community
6. Social Networks:	a. Frequent and regular ties with neighboring communities.	a. Infrequent and irregular ties with neighboring communities.
	b. Cooperation between organizations (clubs) - frequent interaction.	b. Organizations interact on few occasions.
	c. Local influentials are conspicuous; (1) Same leadership for a number of community groups of varying types. (2) Same leadership persists over time. (3) Community and organizational leaderships overlap with business leadership.	c. Leadership inconspicuous; (1) Leaders tend to be professionals. (2) Difficult to ascertain whether economic and social leaderships overlap.
	d. Class lines recognizable.	d. Class lines not apparent.
	e. Pride in and identity with community expressed.	e. Limited expression of community identity.
	f. Individual and community goals identical.	f. Individual and community goals distinctive.
	g. Shared history and traditions. (1) Community pride in past successes. (2) Individuals identify with background of prosperous agricultural community.	g. Little reference to history and tradition. (1) No prominent past. (2) Independent people, predominantly from small mountain farms.
	h. City pays more attention to local people than to outsiders.	h. City pays more attention to outsiders than to local people.

Indicators	The Autonomous Community	The Open Community
7. Newspapers:	a. Masthead motto promotes city.	a. Masthead motto promotes paper.
	b. Concentration of news stories on a few topics.	b. No concentration of news coverage.
	c. Continuous reporting from small group of neighboring communities.	c. Infrequent coverage of news from sizeable number of neighboring communities.
	d. Newspaper emphasizes agricultural economic news more than other from neighboring communities.	d. Newspaper emphasizes non-agricultural news compared to agricultural news from neighboring communities.
	e. Articles focus on city concerns and personalities.	e. Articles focus on external affairs and personalities.
8. Responsiveness to MKP:	a. Active representation and participation in public hearings. Active role of business people.	a. Minimal representation and participation in public hearings. Active role of attorneys.
	b. Community support for promoting MKP-developed areas for commerce and recreation.	b. Little activity to promote MKP-developed areas for commerce or recreation.
	c. Community changes notable since construction of MKP.	c. Few noticeable changes in community life since construction of MKP.

Summary of Chapter. The typology of communities presented in terms of general statements and in the more specific formulations on pages 68-71, represent a framework for further analyses of the reactions of small cities to the MKP. The open community and the closed community are proximations of reality. In current terminology, they signify two sets of indicators for constructing "community profiles." Although bringing attention to the same phenomena, they are designed to facilitate differentiation between communities in order to help explain likely differences in responses to socially impacting agents. The next chapter discusses more fully their application to the communities affected by the MKP.

CHAPTER V: COMMUNITY ORIENTATIONS TO SOCIAL CHANGE

The Big City as Small Cities. The interest of the Institute for Water Resources in the conduct of ex post facto social and economic analyses of the McClellan-Kerr Multiple Purpose Arkansas River Project poses the challenge of detecting and identifying significant variables for social impact assessment. The aim of this preliminary research study has been to develop procedures for further investigations of the ways in which small cities with populations under 5,000 have been affected. The significance of this may be drawn from analogy. Studies of the New York SMSA provide gross pictures of a large population but sacrifice an understanding of the area's rich diversity, of images about the many communities within it held by countervailing citizens' groups. The studies frequently depict New York on the basis of averages or generalizations which overlook not only the significant differences within the metropolis, but also differences in meanings of "fact" due to different images of the city. Increasingly, American society has become aware of the crucial importance of recognizing the relationship between how people see their world, what they do and how they react to and interpret what they have done. Study of small cities may disclose what is going on in the big city, too.

Similarly, in the study of the impact of the navigation system

on the Arkansas River region, concern with gross changes, particularly from an economic perspective, eclipses the myriad responses of the hundreds of little towns and cities within the area. This study attempts to explore their situations from a historical perspective by directing attention to persistent orientations of a city's people in coping with life situations. The main aim of this report is not to analyze the impacts on these communities, but rather to develop a research strategy appropriate for accomplishing the analysis of impacts that have occurred and continue to occur, in order to achieve methods for future impact assessment.

In Chapter II, three questions were raised as significant for accomplishing the goals of this project. The answers to those questions will be discussed insofar as they focus attention on the research strategy developed.

a. What has been and what continues to be the social impact of the MKP on small cities?

In seeking an answer to this question, the decision was made very early that the impacts of the river on the communities should be studied prior to the project's development. Therefore, historical information was investigated. From it emerged many interesting details which have a bearing on the lives of people to this day.

Historical Impacts of the River. Of course, the earliest impact of the river on the people was its role in the settlement

of the Southwest. The river was a primary mode of travel and communities developed along its banks at points which were considered geographically, economically and socially feasible by the pioneers and traders. The reputations individual communities acquired at some time in their history may color their life today. This appears to have been true of Dardanelle. In the post-Civil War - 1910 period, it was reputed to be the leading trade center on the river between Fort Smith and Little Rock. The precedent set by the early settlers may have helped to attract people whose descendants persisted in the business tradition or who were capable of assuming leadership.

Floods and Public Hearings. Another major impact of the river was the terrible flooding that occurred periodically, destroying acres of fertile land. Since the early 1800's, local people have made efforts to persuade the Federal Government to provide some form of protection. The list of public hearings and legislative actions that can be traced into the last century is indicative of the ability of people in the localities along the river to mobilize for action.

Community Participation and Public Hearings - Arkansas. Examination of public hearing records provides some indication of community participation. (However, it should be noted that they are incomplete records, of uneven quality, and do not consistently identify individuals or groups). The data showed that Ozark

and Dardanelle had community leaders who, stimulated by one or two individuals, expressed their interests and participated in the long-term efforts to promote flood control. They attended Washington hearings as well as local ones. Ozark had two very active people: both were attorneys and one was president of the Arkansas River Basin Association. Dardanelle's participants seemed to have a broader base in the business community. Its delegates represented the general interests of the city. For example, at a 1946 hearing in Dardanelle, testimony was offered by local businessmen for levee construction in terms of how it would increase agricultural productivity and prevent erosion. Losses were noted. Neighbors who objected to specific aspects of proposed projects because of encroachment on their property were heard. The business community stressed what construction could do for the community in the future rather than concentrating on flood damage. At this meeting and others, the business people had the support of the drainage district organization. (Arkansas appears to have had well-organized and well-represented drainage districts).

Community Participation and Public Hearings - Oklahoma. From the limited data on hearings available for this study, it appears that residents of the small towns and cities in Oklahoma and local farmers did not attend or write letters. The spokespersons in Oklahoma were primarily representatives of major corporations, government agency personnel, or affluent

landowners. Although one of the thirteen public hearings in Oklahoma was held in Sallisaw, city people were not identifiable. It may be that since Sallisaw is a few miles from the river, interest was not aroused. Big city interest groups were primarily desirous of pushing for a navigation project rather than flood control. Sallisaw did not appear to have locally owned businesses perceiving the advantages of that.

River Development and the Newspapers. The progress of river development was a topic of the newspapers in all three cities. However, the articles differed in Dardanelle from those in Ozark and Sallisaw. The former mentioned the activities of local people and efforts to raise money, and send delegates to Washington. Congressional action and inaction, and the formation of the Arkansas River Basin Association were reported in the Dardanelle papers. The papers showed the personal involvement of the members of the city in the long struggle to get governmental action. Cities reported "the facts" with minimal indication of community concern. That the editors favored the project was manifested in the use of words like "success" in headlines and in the body of articles.

Construction of the Dardanelle Dam preceded construction in the two other cities. Therefore, it is little wonder that the Dardanelle Post Dispatch carried articles in two of the 1950 issues. One was a lengthy history, written by a local proponent

of the project, of the plans, anticipated benefits and status of the MKP. In contrast, the Sallisaw article cited a Corps official as stating that completion of dam construction would have protected land washed away during a recent flood. Ozark's sample issues contained no information about the project despite the fact that hydroelectric power was to be generated there. In 1960 and 1970, Sallisaw had more news related to the MKP than the other two cities. The articles had no immediate or direct connection with Sallisaw, dealing primarily with project construction bidding. One cited a power association spokesperson as urging that"the Democratic and Republican parties petition Congress to restore multi-purpose federal dams to their original purposes." (Sequoyah County Times, 6/17/60, p.1)

By the end of 1970, the navigation project was completed from Little Rock to Tulsa and the newspapers recorded this fact. Sallisaw's paper anticipated President Nixon's role in the official opening of the MKP. During the same year, the Dardanelle paper was replete with information about the opening of "Keenan's Port of Dardanelle," "the prime center of the fast-growing Arkansas River Valley, an area destined to become one of the leading industrial locations in the world." (Keenan Brochure, quoted in Dardanelle Post Dispatch, 12/11/69). Congratulatory speakers told the crowd that had braved icy weather to attend the port's opening, that there was a bright future for the area.

In a rare reference to the city qua city, Sallisaw's editor expressed similar optimism for the city's future in relation to the Arkansas River: "To me, it stands as one of the monuments to mankind's ability for achievement. It becomes easier and easier for me to foresee navigation running the river at full peak, and to visualize Sallisaw as one of the finest and busiest ports on the stream." (Sequoyah County Times, 1/1/70).

All in all, Dardanelle's paper devoted a good deal of space to the MKP, particularly because of its pride in the port across the river that was opened by a local family. Although the number of articles during the sample period were limited, they were lengthy. In addition, articles that dealt with other subjects also made reference to the river project or port. Both were viewed from the perspective of persons who identified with the river. Ozark and Sallisaw papers were very different in their orientations. The waterway was not viewed as an integral part of the community's survival needs. The progress of the project was reported in terms of "factual" accounts of Congressional action or inaction, of costs and contracts.

Ripple Effects of the MKP. Conceivably, effects of environmental changes could be indirect. Thus, if the MKP served to induce business and industry into a community, there could be spin-offs which the local citizenry might not associate with the river.

Dardanelle and the River. That the MKP made possible the building of the port was very much in the forefront of the thinking of Dardanelle business leaders. Throughout the years, they viewed it as something which would stimulate the city's growth. It can be perceived as a community project that brought the city fathers together in a common cause.

As the "cause" was won, as "the visions of the river dreamers were accurate...no more floods to destroy homes and croplands... the long barges lying alongside the dock almost in the shadow of the new bridge..." (Dardanelle Post Dispatch, 8/13/70), Dardanelle grew and changed.

Notable Changes in Dardanelle, 1960-1970. This decade was a time of great ferment in Dardanelle. The percentage increases in the city's population and in new firms were about the same (46%). A second bank opened up; a new high school was built; and the mayor and building inspector had new offices. These three changes signify the "decentralization" of the leadership group for several reasons. A second bank suggests competition between highly important institutions; the new high school might mean an increase in the importance of education for jobs; and the new offices for city officials implies increased specialization and more formalized relationships. A few other noteworthy changes took place by 1970. There was the opening of headquarters for an eight-county social service organization (The Arkansas Valley

Action Council - ARVAC) and of a new health clinic. These openings suggest that social problems were gaining public recognition. And - possibly symbolic of the denouement of highly personalized neighborhood social control - a dog leash law was introduced.

Community Conflict - Dardanelle. Of particular interest in relation to the river in 1970, was a controversy which arose when a lumber company from the area sought to build a port (or dock) in the immediate area of Dardanelle. Conflict between prominent citizens developed and the plan was dropped. Another port was also under consideration. It was to be operated jointly by Dardanelle and Russellville as a public port. It met the same fate. In both instances, private entrepreneurial interests and community survival melded. It appeared that the prevailing Dardanelle leadership was trying very hard to protect the city's position of independence as against Russellville to which it was linked by a bridge.

Newspaper Ownership: Another noteworthy change involved the Dardanelle Post Dispatch. The editor-publisher had always been a member of one family for over 50 years. Then, from the late 50's into 1970, the paper had three different owners. Two were husband-wife teams replacing the earlier father-son business. Continuity was maintained by a columnist during part of the time.

Changes in Sallisaw and Ozark, 1960-1970. These two cities were changing also. Their populations were growing; new businesses were entering the cities. After the construction of the dam, hydroelectric power gained greater importance in Ozark. Its producers provided some jobs. Yet, in neither city was there any evidence of an upsurge in employment opportunities for the local people. Except for a few new buildings, including a hospital privately endowed, Ozark in 1970 remained the small community with the courthouse in a park-like setting centrally located, and ample fields extending from the more settled sections of the city to its distant city limits. This image contrasts with that provided by a 1970 map of Sallisaw. It shows a number of subdivisions and a differentiation between the original city and the more recent one. Indirectly, this growth may have something to do with the MKP.

The recreation areas provided by dam-formed lakes relatively close to Sallisaw may stimulate its increases both in population and in businesses. The opening of the Kerr McGee plant in 1970, employing about 200 people, is conceivably related to the development of the MKP. (Senator Kerr was one of its most avid supporters and Sequoyah County is "Kerr Country"). However, the plant is on the Illinois River some seventeen miles from Sallisaw. It is highly probable that the improved waterway provided an added attraction for locating it there, but how much employment and how much of a ripple effect it has had on Sallisaw, is unknown.

Yet, despite some changes, Ozark and Sallisaw appear to preserve their established patterns for coping with change: it is faced by individuals in accordance with their own modes of adjustment to it. There is little evidence of community-wide response.

This seemingly persistent individual rather than community response pattern is reflected in the newspapers of Ozark and Sallisaw. Both were family-owned papers; both were in the hands of their respective owners throughout the decades studied. The styles of reporting remained the same through the entire period. The "objective reporting" approach which characterized Sallisaw's paper in earlier times was perpetuated into 1970. Ozark's focus on the rank-and-file citizenry remained constant.

Summary. The impact of the MKP appears to have been quite different in terms of community responsiveness of Dardanelle, on the one hand, and Ozark and Sallisaw on the other. The former, having experienced extreme flooding of agricultural lands over the decades, found in the struggle to get Congressional support for flood control, a cause which struck a responsive chord among the post-World War II residents who joined earlier campaigners for support. Evidently, it had meaning for them which was relevant to their everyday needs and personal lives. At

least one family in their midst perceived the personal advantages the navigable river would provide its businesses. So the individual and community well-being were meshed, in the one instance in terms of economic advantages and in the other in terms of potential growth and reclamation of "a place in the sun". For the community as a whole, the greatest impact of the MKP seems to have been its unifying force among Dardanelle people. It provided them a vision of a brighter future and served as a raison d'etre of their efforts by linking their environs with centers of power and potential.

Practically, it had another observable impact. During the construction of the Dardanelle Dam and Lake, workers stayed in the city. A housing survey was conducted and efforts were made to accommodate the needs of the construction workers. Temporarily, at least, the lives of permanent community members were affected.

What effect the achievement of the goal - the MKP - will have in view of the rumblings of discord among local people regarding the second port and the growth of Russellville across the river is suggested in later discussion of scenarios.

Ozark and Sallisaw appeared to have no community-wide visions of their place in the future. Direct impacts of the MKP upon them have been imperceptible. (In a later section, alternative futures will be presented.)

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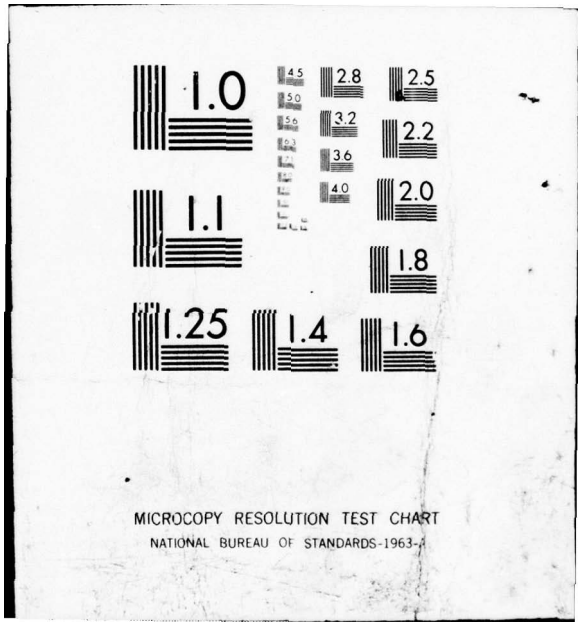
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"Intervening Variables." If one assumes that selected aspects of community life can be transported to a laboratory for apportionment in experimental designs, then it might be possible to identify specific human activities as correlated with the introduction of the MKP. If, on the other hand, the assumptions set forth on pages 28 and 29 are made, then the isolation of variables becomes more complex. As John Dewey has pointed out, there is an insoluble problem in attempting to distinguish stimuli from responses. Questions of "necessary conditions" (factors that must be present before it is possible for a given event to take place) and "sufficient causes" (given the presence of the necessary conditions, factors that virtually guarantee that an event will occur, and conversely, that it will not occur in their absence), must be reckoned with. Thus, the presence of a navigable river is a necessary condition for construction of a port for certain kinds of ships. However, it is not a guarantee of a port. Nor is it possible to isolate the construction of the MKP from other occurrences going on simultaneously.

Many other events were taking place in the 1950's and 1960's on both the local and national levels. On the national scene, post-war adjustments proceeded, the Korean War was on; the space age was born; involvement in Vietnam was initiated. A president was assassinated; social movements for civil rights, women's rights, environmental protection, and endless other causes were prominent on the social horizon. People were streaming to the cities, agriculture having lost its primacy in

American society. There was the early boom and inflation was climbing at an accelerating rate.

At the state level, I-40 was planned and constructed. Oklahoma and Arkansas stimulated planned growth by organizing regional and other developmental bodies to bring in industry. Incipient agribusiness was replacing marginal farms and traces of the plantation system. At the local level, relatively small cities were acquiring airports, radio stations and TV channels. New businesses and industries arose in the towns and cities, both near and far from the MKP, to meet the needs of their burgeoning populations. Young men were called up for service, others returned to their small city homes as veterans.

What was happening in Oklahoma and Arkansas was mirrored in the three Sample Cities. Their veterans were returning from World War II and with them came rural people, especially to Sallisaw and Ozark. The three cities experienced a population loss of minority group members. Businesses and industries, including branches from the bigger state concerns and out-of-state ones, opened up to compete with the established local enterprises. In other words, the Sample Cities were encountering changed conditions which radiated from international, national and state sources. The population growth, highway building, industrial and business development, expansion of mass media and mobility patterns experienced were like those affecting other small

cities within and without the radius of the MKP. Therefore, the problem of identifying causal relationships is unsolvable. It is possible, however, to indicate the interactive nature of the various components in the situation, including the MKP.

b. How are the similarities and differences in response to the MKP between the communities to be explained?

The answer to this question has been presented in the chapter on the typology of communities. It was suggested that a community, because of its unique history, develops a specific type of social structure and style of living. It develops a "social climate" distinguishing it from other social worlds. This climate provides the citizenry with mental images of the community, which relate the individual to a totality greater than the sum of individuals. These images, however, are significant as more than mental constructs. Study of them surely provides indications of directions for the future. It also suggests how these images are rooted in the realities of social relationships within a city, economic underpinnings essential for the survival of the people, and the interplay of the city and the world of which it is a part.

In the first phase of this research effort, it became apparent that, despite many similarities, two of the cities occupied different social worlds. Subsequent intensive analysis provided further evidence that the third city shared a climate similar

to one of the other Sample Cities. Further, it was found that the city's social climate permeates daily life, including the decision-making processes and the coping mechanisms operating in efforts to perpetuate individuals and communities. Therefore, the explanation of the differences in responses of the communities to the implementation and actualization of the MKP lies in their constituting different social worlds with different social climates.

To study the social climate of every city would be beyond human capacity. An aim of the scientist is to simplify the observation of reality by classifying. Accordingly, what has been proposed is that a typology of social worlds and climates be developed. In the preceding pages, two classes have been identified, the open community and the autonomous community, and their respective characteristics presented. Using current social impact assessment terminology, what has been proposed are two community profiles which can be identified both in general terms and by a listing of social indicators.

The Open Community. Briefly, the open community may be characterized as one in which community identity qua community is amorphous. It may be easier to recognize the citizenry's loyalty to the state or the nation than to the community itself. Or, people may strongly identify with their neighborhood and work groups. Community leaders appear to be spokespersons for

particular segments of community life, e.g., business or educational, and there appears to be little overlapping in these different spheres. Correspondingly, the relationships between people are likely to be more formal and impersonal. The absentee owners with very high recommended credit references are not likely to be involved in the day-to-day concerns of perpetuating the life of the community, unless it affects their economic interests. Further, the cadre of professionals and managers they may support in the community is likely to be occupation-oriented rather than community-oriented. The professionals want the community to be a good place for them to live while they are in it, but they are less likely to perceive it as part of their heritage. (Here, state loyalties may play a more important part than community identity). On the other hand, while the bulk of the population may have lived in the city, i.e., constitute a relatively stable population, its role is not clearly identifiable.

Thus, the open city gives the impression of an individualistic climate, of laissez-faire. Whatever the controlling forces in the city may be, they are not readily detectable. It is hard to ferret out "where the buck stops", and who the leaders are. Therefore, whatever is done in response to a crisis (like a flood), to an opportunity (such as providing a service for riverboats), will depend on individual initiative which is invisible.

The Autonomous Community. By contrast, the social climate of the autonomous community has high visibility. The local leadership is readily identifiable and is noticeable in virtually all facets of community life. The high level of participation in voluntary organizations coupled with the inter-organizational activities and a trader's perspective, produces greater identification with the community. Its activities are meshed not only with sustenance-providing endeavors, but also with the maintenance and growth of the whole city. This strengthens intra-community ties and fosters person-to-person interaction between status groups. This means that the leadership perceives the needs of the community as complementary to its own, so that both benefit from any given course of action decided upon.

The Role of Leaders. From the foregoing it appears that the social climate of a community is determined by the nature of its leadership. Questions about the validity of data sources may be raised when attempting to apply the typology of open and autonomous cities which suggest indicators for the construction or reconstruction of city life. It is the contention of this report that difficulty in identifying an elite, or several elites, is as important for typing a city as is ease of doing so. A leading social science theoretician has said that public opinion, which is manifestly normative and embraces the value system of a society,

> "tends to be actually the opinion and political will of the propertied, urban and educated upper classes. It is, however, presented to the less wealthy, the rural and the uneducated classes with the claim of authority, as the correct opinion which every respectable citizen and loyal patriot is expected to share. As a means of social control, public opinion takes in modern society, the place which was occupied by religion in medieval communities, although its claims are based on intellectual, i.e., critical scientific thought, unlike religion...the fact that public opinion can be made to suit the aims of groups in control of the means of expression and communication of ideas makes it essentially a phenomenon of rational group will...doubt or deviation from opinion is, however, considered and treated much like religious heresy." (Tönnies in Barnes, 1948)

The newspapers which served as a major source of information about the day-to-day life in the community mediate between the "authorities" in the city and the population of actual and/or potential readers. Their persistence suggests that they are meeting a need or performing a service for the city.

In this particular study, leadership, as discerned from the newspapers and other sources, was viewed as integrally interwoven with the historical background of the communities, the economic organizations providing employment and wealth to the community, and the pattern of social relations which evolved over a period of time in response to internal and external socio-environmental pressures and opportunities. All of these factors taken together produce an ever-evolving social climate.

c. <u>What kind of research procedure would be useful in answering the above questions</u>?

The research strategy developed may be appropriately referred to

as a "diachronic comparative case study strategy using triangulated methodologies and involving inductive analysis of archival data." It is diachronic in the sense that it covered a thirty-year period; comparative, since it is a tale of three cities; and a case study in its research to reconstruct each city. The triangulation of methodology refers to several aspects of the research project. Varied sources of data were used: historical records and economic reports, Dun and Bradstreet, U.S. Census, newspapers and public hearings. The data were handled in varied ways. Quantitative and qualitative analysis of the newspapers was carried out. The Dun and Bradstreet listings of recommended credit ratings were examined as a source of information about types of businesses in the cities as well as their financial strengths and headquarters. Then the information from these sources was integrated in order to isolate factors which could be utilized for answering two significant questions: How can differential responses to the initiation and actualization of the McClellan-Kerr Multiple Purpose Arkansas River Project (MKP) be explained? And second, what kinds of data are useful in developing a community profile which will facilitate the process of social impact assessment?

The answers to these questions have been detailed in the preceding pages. In the next section, special attention will be given to the implications of this study for future impact assessment, both in the Arkansas River area and in other situations involving waterways of the U.S.

IMPLICATIONS

This study is posited on certain assumptions about the nature of group life. Briefly, these may be summarized by saying that a city is composed of dynamic, ever-changing groupings of people. Their belief systems and action patterns are rooted in earlier generations and accommodate to exigencies of the social and physical setting at the local, regional, national and international levels. Because of the interrelatedness of all parts of the United States (as well as global interdependence), it is virtually impossible to engage in the kind of prediction sought in highly controlled experimental situations. Therefore, the aim of a sociologically-oriented study is to derive insights which will provide a basis for understanding cities and recognizing alternative futures.

The study of the Sample Cities covered approximately three decades, ending in the year 1970. The paradigm developed from their study lends itself to the development of potential alternatives for future responses on the part of open and autonomous communities. The options may be expressed as scenarios available to a community in terms of leadership succession, social climate, response to the change agents and possible outcome. These scenarios have been derived in answer to the question, "If at any given historical moment, using the knowledge acquired about the Sample Cities, a prediction of what might have happened or what is apt to happen, were made, what alternatives are likely?" The following six scenarios were developed.

Table 5: THE OPEN AND THE AUTONOMOUS COMMUNITIES

SCENARIOS FOR ALTERNATIVE FUTURES

The Autonomous Community

	ALTERNATIVE I	ALTERNATIVE II
BASELINE LEADERSHIP	Core of highly visible community-wide leaders	Core of highly visible community-wide leaders
LEADERSHIP SUCCESSION	Selective acceptance of outsiders into core leadership group or Replacement of core leaders by family members	Newcomer leadership types outnumber core leaders a) Coopt core leaders or b) Dominate and replace core leaders
SOCIAL CLIMATE	Citizenry shares strong sense of community identity; accepts core leadership's responsibility to preserve traditional cohesion	Community identity persists but latent conflict between core leaders and new leaders
RESPONSE TO CHANGE AGENTS	Acceptance or rejection of specific issues that arise on basis of core leadership decisions in terms of criterion that what is good for self and community, are interlocked	Newcomers remodel city in own image, accepting, inducing and rejecting changes accordingly, or Erratic responses to change agents
OUTCOME	Automonous community continues	New type of closed community evolves in time; or Open community develops; or Absorption into another city's identity

TABLE 5 (Contd)

THE OPEN AND THE AUTONOMOUS COMMUNITIES

SCENARIOS FOR ALTERNATIVE FUTURES

The Autonomous Community

	ALTERNATIVE III	ALTERNATIVE IV
BASELINE LEADERSHIP	Core of highly visible community-wide leaders	Core of highly visible community-wide leaders
LEADERSHIP SUCCESSION	Leadership vacuum when core leadership departs, retires	Most of core leadership departs, retires; no replacements; small core group attempts control
SOCIAL CLIMATE	Identity with city gradually diminishes; individual and group loyalties persist	Community identity persists with increasing dissension developing
RESPONSE TO CHANGE AGENTS	Individuals (groups) accept or reject changes in terms of own interests; Personal or group initiative more important than community perpetuation	Inaction; or Resistance to changes
OUTCOME	Open community develops; or Absorption in another city's identity	Community qua community loses identity and Open community develops; or Absorption into another city's identity

TABLE 5 (Contd)

THE OPEN AND THE AUTONOMOUS COMMUNITIES

SCENARIOS FOR ALTERNATIVE FUTURES

The Open Community

	ALTERNATIVE V	ALTERNATIVE VI
BASELINE LEADERSHIP	No visible community-wide leadership	No visible community-wide leadership
LEADERSHIP SUCCESSION	No visible procedures for succession	Highly motivated individual(s) or group(s) attempt to become community-wide leaders
SOCIAL CLIMATE	Persistence of subgroup loyalty and identity with state or nation	Emergent community-wide, shared identity
RESPONSE TO CHANGE AGENTS	Individual or corporate self-interest-motivated responses	Deliberate efforts made to weld community into cohesive unit by inducing change or selectively accepting and rejecting change agents
OUTCOME	Open community maintained	Autonomous city gradually develops

Autonomous Community: Alternative I. Assuming an autonomous type of city at a given historical moment, there is a core leadership which has developed over a long period of time. It perceives its own interests to coincide with the community's and vice versa. Thus, the goal of survival of individual and group are recognized to be closely interdependent. In such communities, one generation of a family replaces another in assuming responsibility for family-owned businesses and for the community's leadership. If it is necessary to recruit outsiders, it is done judiciously so as to preserve the city's lifestyle and guardianship of its gates. In this way, the social worlds of the city are preserved and change is admitted selectively, mollified and absorbed. This is referred to as Alternative I.

Autonomous Community: Alternative II. It suggests what might happen in the autonomous city if newcomers on the scene are ready and eager to assume leadership roles, especially if they outnumber the core leaders. They may have been attracted to the city because of its image of the traditional small town - everyone knowing everyone, a slow pace of life, etc. They are eager to preserve the image they bring with them and play an active part in maintaining it, and frequently, in improving it in accordance with their own expectations.

In order to achieve their goals, newcomers may attempt to

work with the remaining interested core leaders, i.e., to co-opt them to their cause. This serves to make the transition from the old leadership to the new more gradual. At the same time, it serves to weaken the core leadership by splitting its ranks between those who see their interests with the newcomers and those who do not. Instances requiring decisions which have a bearing on the total community's life may result in a tug-of-war. In such a case, the community-wide leadership as such may disintegrate and the city become more like the open community type.

Under these circumstances, there exists also the possibility that the community may become part of a proximate larger urban center through absorption into the urban limits, inclusion in a standard metropolitan statistical area, or simply as a bedroom community, a suburb. However, if the newcomers and the remaining core leaders are able to unite and work effectively together toward common goals, there is the possibility of a new core of gatekeepers and the persistence of the autonomous community. It may even be stronger because of the infusion of new leadership and it may be different because of the image the new leaders want to create (as well as because of ever-changing historical and socio-economic conditions).

Autonomous Community: Alternative III. The third scenario departs from both I and II in that the core leaders "fade away" -

through death, departure from the city or retirement. A leadership vacuum develops. Several consequences may ensue. Alternative III suggests that no visible community-wide leadership may develop, with the result that change is met on individual terms. Countervailing groups and individuals may cancel out acceptance or resistance to change. The net effect is to transform the autonomous city into an open one.

Autonomous Community: Alternative IV. This scenario is a picture of what might happen if the core leadership ranks are diminished and there are no replacements. Assuming that a dedicated small group has control, change is likely to be resisted in an effort to hold on to the past. The result may be the dissolution of the community's identity and its transformation into an open city. Here, again, there is the possibility of its inclusion within the sphere of another larger city.

The Open Community: Alternative V: The remaining scenarios provide paradigms for the open city. As Alternative V shows, there are no visible procedures for assuring succession, since there was no visible leadership to begin with. Each individual organization (business or industry, fraternal or service) is likely to deal with problems of succession in its own way. Similarly, there will be individual solutions to the problem of coping with change. The people who induce or resist community-wide changes will vary with the issues. For example, local

businessmen whose livelihood depends upon local consumers are likely to take a stand on changes impinging on their self-interest. Another group will probably assert itself on an issue, such as a new utility plant. If there are local branches of out-of-town corporations that resist competition, their exercise of power may be invisible to the local community. It becomes important, therefore, for the social impact assessor to become cognizant of the potential leaders in a city in order to anticipate their stances. This is not readily accomplished in an open city.

The Open City: Alternative VI. The very invisibility of leadership roles in the open community makes it fertile territory for an individual or group to assume leadership and attempt to weld the community into a cohesive whole. In so doing, these parties become the gatekeepers of the community. To the extent that an effort to develop a "community consciousness" exists, the open community may gradually be transformed into an autonomous one.

CONCLUDING OVERVIEW

The Recommended Research Strategy. The reader is reminded that the entire research project has been directed toward devising a research strategy for social impact assessment. The strategy, unfolded in the preceding pages, is deemed useful in both ex post facto study and future-oriented research. Very simply stated, four major steps are involved:

a. Acquisition of knowledge about the community qua community over time. (This may be facilitated by using the data sources cited in Chapter III).

b. Development of a community profile in order to gain understanding of the social climate of the community and its proximation to the typology proposed. (Social indicators are presented in Chapter IV).

c. Recognition of alternative futures for the given city. (Alternative futures are suggested in the scenarios presented in Chapter V).

d. In ex post facto study, interpretation of the findings about the community at any given point in time; in projections into the future , interpretation of what has happened to provide insights as to what might happen, given the existing conditions.

Application of this strategy to other cities may help in disclosing a broader range of community types than found herein. In such a case, the proposed typology could be refined and the indicators sharpened. Further testing of the typology and the recommended scenarios may increase understanding of processes operating in the lives of a community, which will in turn facilitate the decision-making of policy-makers. One can only

speak of "increasing understanding" because of the complexity of the human condition. The complexity characterizing community life is graphically expressed by Martindale (15, 1964, p.86):

> Among the many types of communities formed by men in their ceaseless explorations of the mysteries of experience, some have played more trenchant historical roles than others...They are not organisms. They are not born and they do not die like living things. They are strategies of collective life which are formed and destroyed by men. They are primary examples of the ancient truth that "man cannot have his cake and eat it, too." To form new communities, men must transform their old ones...

The present study, which has as its point of departure a similar theoretical orientation, is likely to raise many more questions than it has answered, but both the questions and their future answers are of crucial importance to decision-makers. The study is intended to introduce procedures and techniques firmly grounded in sociological theory and to stimulate further application both in small cities within the Arkansas River corridor and in other communities and urban settings.

Selected References

1. "An Over-all Economic Development Program for Sequoyah County." Prepared by the Program Planning and Resource Development Council. April, 1963.

2. Antle, L.G. "An Overview of the Impact Study of the McClellan-Kerr Multiple Purpose Arkansas River System." Institute for Water Resources. Review Draft, Nov. 1974.

3. Ayer & Sons Directory of Newspapers and Periodicals (Philadelphia: Ayer 1972).

4. Badger, D., D. Shriner and R. Presley. "An Analysis of the Impacts of Investment and Consumption Expenditures for Outdoor Recreation at the McClellan-Kerr Arkansas River Multiple Purpose System: Some Preliminary Observations." IWR Seminar Notes, Feb. 25, 1975.

5. Banks, W. History of Yell County, Arkansas. Arkansas Historical Series, No. 9, July 1959. Van Buren, Arkansas: The Press-Argus.

6. Barnes, H.E. Introduction to the History of Sociology. Chicago: University of Chicago Press, 1948. (Trans. from F. Tonnies, "Kritik der öffentlichen Meinung," Berlin, 1922).

7. Corps of Engineers, Economics Branch, Southwestern Div., Dallas, Texas. "McClellan-Kerr Arkansas River Navigation System Socio-economic Impact Study: Interim Report, Impact Study and Project use during 1971. Review Draft." A report submitted to the Center for Economic Studies, USA-IWR, March, 1974.

8. Denzin, N.D. The Research Act: A Theoretical Introduction to Sociological Methods. Chicago, Ill.: Aldine Publ. Co., 1970.

9. Dun and Bradstreet, Inc., Reference Books. New York: 1940, 1950, 1960, 1965, 1970.

10. Hagle, P., D. Schreiner, L. Warner and R. Watson. "Basic Data and Projections for the Oklahoma Economy by Planning District." Research Foundation, Oklahoma State University, July, 1973.

11. Heffelfinger, W.A. "Economy of the Arkansas River Corridor." Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock, Ark., Jan., 1974.

12. Heffelfinger, W.A. "Economy of the Arkansas River Corridor: Appendix Table." Industrial Research and Extension Center, College of Business Administration, University of Arkansas, Little Rock, Ark., Jan., 1974.

13. Industrial Development Department. Oklahoma Gas and Electric Company. "Community Profile of Ozark, Arkansas."

14. Leven, C. L. and R.B. Read. "A River, a Region and a Research Problem." IWR Report 71-6. July, 1971.

15. Martindale, D. "The Formation and Destruction of Communities," in Explorations in Social Change. G.K. Zollschan and W. Hirsch, Boston: Houghton-Mifflin Co., 1964.

16. Morgan, W.C. "A Study of the Social and Economic Effects of Keystone Reservoir on the Community of Mannford, Oklahoma." Masters Thesis, Oklahoma State University, 1970.

17. Ozark Regional Commission. "Community Development Profile Questionnaire." Oklahoma Industrial Development and Park Department.

18. Peach, W.N. and R. W. Poole. "Human Material Resources of Sequoyah County: A Profile for Growth and Development." Technology Use Studies Center, Southeastern State College, Durant, Oklahoma, Aug. 1965.

19. Toffler, A. Future Shock. N. Y.: Random House, 1970.

20. U.S. Congress. National Environmental Policy Act of 1969. (Public Law 91-190).

21. U.S. Congress. House. Report of the Board of Engineers for Rivers and Harbors. H. Doc. 221, 80th Cong., 1st Sess. 1946.

22. U.S. Congress, Senate. Report of the Board of Engineers for Rivers and Harbors. S. Doc. 107, 81st Cong., 1st Sess., 1949.

23. U.S. Congress., Senate. Report of the Board of Engineers for Rivers and Harbors. S. Doc. 111, 90th Cong., 2nd Sess., 1968.

24. U.S. Congress. River and Harbor and Flood Control Act of 1970 (Section 122, Public Law 91-611).

25. Van der Slice, A. "History of Selected Cities and Counties along the Arkansas River." Unpublished manuscript, 1975.

26. Microfilmed Newspapers.

Dardanelle Post Dispatch. 1943-8; 1949-52; 1958-61; 1969-71. Arkansas Historical Association, Little Rock, Ark.

Ozark Democrat Enterprise. 1949-56; Arkansas Historical Association, Little Rock, Ark.

(Ozark) The Spectator. 1959-63; 1968-1970; 1970-72. Arkansas Historical Association. Little Rock, Ark.

Sequoyah County Times. 1949-50; 1959-60; 1970. Oklahoma Historical Association. Oklahoma City, Oklahoma.

APPENDIXES

Figures:

APPENDIX A

SAMPLE CITY SETTINGS

TABLE A-1

POPULATION CHARACTERISTICS: Arkansas River Corridor*
1950, 1960, 1970

	1950	1960	1970	Percent Change 1950-60	Percent Change 1960-70
TOTAL POPULATION	621,214	649,097	743,066	4.5	14.5
White (%)	485,996(78)	517,130(80)	610,151(82)	6.4	18.0
Non-White	135,218(22)	131,967(20)	132,915(18)	-2.4	0.7
Urban	298,255(48)	374,252(58)	477,343(64)	25.5	27.5
Rural	322,959(52)	274,845(42)	265,723(36)	-14.9	-3.3
Non-farm	139,935	205,341	230,087	46.7	12.1
Farm	183,024	69,504	34,585	-62.0	-50.2
DENSITY/SQUARE MILE	48.3	50.6	58.4	-	-
AGES					
0-21	251,372(41)	270,555(42)	305,287(41)	7.6	12.8
22-44	201,011(32)	178,533(28)	204,665(28)	-11.2	14.6
45-64	119,308(19)	133,962(21)	152,663(21)	12.3	14.0
65 and over	49,523(8)	66,047(10)	80,451(11)	33.4	21.8
Median Age	28.6	29.3	28.2	-	-
NUMBER OF HOUSEHOLDS	173,757	189,648	235,249	9.1	24.0
PERSONS PER HOUSEHOLD	3.45	3.31	3.07	-	-
MEDIAN FAMILY INCOME**	$ 1,850	$ 3,885	$ 7,156	110.0	84.2

* Eighteen counties in Arkansas and Oklahoma.

** Family income is for year preceding the census year (1949, 1959, 1969).

Source: U.S. Censuses of Pupulation and Housing (in W.A. Heffelfinger, 1974, p.5).

TABLE A-2 .--Population characteristics of Yell, Franklin and Sequoyah Counties, 1950, 1960, 1970

YELL COUNTY

	1950		1960		1970		Percent Change 1950-60	Percent Change 1960-70
	N	%	N	%	N	%		
Total Population	14,057		11,940		14,208		-15.1	19.0
White	13,503	(96)	11,510	(96)	13,789	(97)	-14.8	19.8
Nonwhite	554	(4)	430	(4)	419	(3)	-22.4	-2.6
Urban*	--		--		3,297	(23)	--	--
Rural	14,057	(100)	11,940	(100)	10,911	(77)	-15.1	-8.6
Nonfarm	6,720		8,879		8,775		32.1	-1.2
Farm	7,337		3,061		2,130		-58.3	-30.4
Density per Square Mile	15.1		12.8		15.3		--	--
Ages:								
Under 16	4,548	(32)	3,493	(29)	3,924	(28)	-23.2	12.3
16-64	8,086	(58)	6,866	(58)	8,256	(58)	-15.1	20.3
65 and over	1,423	(10)	1,679	(14)	2,176	(15)	18.0	29.6
Median Age	29.9		36.6		33.8		--	--
Number of Households	4,011		3,761		4,725		-6.2	25.6
Persons per Household	3.5		3.2		3.0		--	--
Median Family Income	$1,176		$2,600		$5,844		121.1	124.8

*Classified as "rural" in 1950 & 1960 Census

Sources: W.A. Heffelfinger (1974)
U.S. Census

TABLE A-2 .—(Continued)

FRANKLIN COUNTY

	1950		1960		1970		Percent Change 1950-60	1960-70
	N	%	N	%	N	%		
Total Population	12,358		10,213		11,301		-17.4	10.7
White	12,166	(98)	10,091	(98)	11,100	(98)	-17.1	10.0
Nonwhite	192	(2)	122	(2)	201	(2)	-36.5	64.8
Urban*	—		—		2,592	(23)	—	—
Rural	12,358	(100)	10,213	(100)	8,709	(77)	-17.4	-14.7
Nonfarm	5,915		7,509		7,214		26.9	-3.9
Farm	6,443		2,704		1,462		-58.0	-45.9
Density per Square Mile	20.1		16.6		18.4		—	—
Ages:								
Under 16	4,080	(33)	3,033	(30)	3,156	(28)	-25.7	4.1
16-64	7,009	(57)	5,733	(56)	6,449	(56)	-18.2	12.5
65 and over	1,269	(10)	1,544	(15)	1,825	(16)	21.7	18.2
Median Age	29.9		35.4		33.5		—	—
Number of Households	3,514		3,208		3,656		-8.7	14.0
Persons per Household	3.51		3.16		3.01		—	—
Median Family Income	$1,227		$2,611		$5,376		112.8	105.9

*Classified as "rural" in 1950 & 1960 Census

TABLE A-2 .—(Continued)

SEQUOYAH COUNTY

	1950		1960		1970		Percent Change 1950-60	1960-70
	N	%	N	%	N	%		
Total Population	19,773		18,001		23,370		-9.0	30.0
White	17,667	(89)	15,959	(89)	20,465	(88)	-9.7	28.2
Nonwhite	2,106	(11)	2,042	(11)	2,905	(12)	-3.1	42.3
Urban	2,885	(15)	3,351	(19)	4,888	(21)	16.2	45.9
Rural	16,888	(85)	14,650	(81)	18,482	(79)	-13.3	26.2
Nonfarm	7,123		10,972		15,681		54.0	42.9
Farm	9,765		3,678		2,704		-62.3	-26.5
Density per Square Mile	28.1		26.0		33.5		--	--
Ages:								
Under 16	7,669	(39)	5,877	(35)	7,841	(34)	-23.4	33.4
16-64	10,648	(54)	9,549	(53)	13,095	(56)	-10.6	37.1
65 and over	1,719	(9)	2,113	(12)	2,734	(11)	22.9	29.4
Median Age	23.5		28.4		27.9		--	--
Number of Households	5,007		5,187		6,855		3.6	32.2
Persons per Household	3.94		3.45		3.23		--	--
Median Family Income	$1,198		$2,492		$5,433		108.0	118.0

APPENDIX B

PUBLIC HEARINGS ON RIVER DEVELOPMENT IN OR NEAR SAMPLE CITIES

TABLE B-1.--Public hearing participation of Sample Cities, notification, attendance and testimony

	Dardanelle	Ozark	Sallisaw
No. of hearings in which participated	6	6	2
No. of persons to whom notices were sent:			
City or county officers	2	2	1
Business or business representatives[a]	2	2	-
Individuals[b]	2	2	1
Clubs or organizations[c]	1	1	-
No. of persons present:			
City or county officials	1	2	-
Business or business representatives	1	4	-
Individuals	4	4	2
Clubs or organizations	2	1	-
Testified or presented statement:			
Pro:			
City or county officials	1	3	-
Business or business representatives	-	3	-
Individuals	-	2	1
Clubs or organizations	1	2	-
Con:			
City or county officials	-	-	-
Business or business representatives	-	-	-
Individuals	-	1	1
Clubs or organizations	-	-	-
Subject of testimony:			
Pro:			
Flood control	4	3	2
Navigation	2	3	-
Power	2	3	2
Recreation	-	-	-
Con:			
Flood control	-	-	2
Navigation	-	-	-
Power	1	-	-
Recreation	-	-	-

[a] Category includes representatives of specific businesses and Chamber of Commerce representatives.

[b] Category includes individuals with unspecified interests; farmers, landowners and civic leaders.

[c] Category includes clubs such as the Rotary, Lions and a miners' union.

APPENDIX C

DUN AND BRADSTREET REFERENCE BOOKS

Fig. C-1.--Dun and Bradstreet Reference Books

S A M P L E

Instructions:

Key to Ratings

ESTIMATED FINANCIAL STRENGTH			COMPOSITE CREDIT APPRAISAL			
			HIGH	GOOD	FAIR	LIMITED
5A	Over	$50,000,000	1	2	3	4
4A	$10,000,000 to	50,000,000	1	2	3	4
3A	1,000,000 to	10,000,000	1	2	3	4
2A	750,000 to	1,000,000	1	2	3	4
1A	500,000 to	750,000	1	2	3	4
BA	300,000 to	500,000	1	2	3	4

Illustration: Recommended Credit Ratings:

54 11 Stanley T E Grocery ... GrMt G 3½
58 12 *Star Cafe* ... — —
55 41 Starkey's Esso Service ... Sstn F 3
56 12 Starnes Bill Men's Clothing ... — —
59 21 Stathakis Theo ... Le — —
28x73 Stauffer Chemical Co● ... Fert A4 A1
Fungicides
Br of N Y City—Manhattan
50 91 Steel Service Inc ... SteelPipe 3 — —
58 12 Stephens Sam A ... Rst G 3½
55 41 Stephens Skelly Service Station 1 — —
59 99 Stephens Truck Refrigeration Service Inc ... 1 — —
53 31 Sterling Stores Co Inc ... Vs
See Little Rock
75 38 Stewart E K Garage NR ... Atrp 0 H 4
54 11 Stobaugh Gladys (Mrs J F) NR 0 K 3½
Gr
65 61 Stone Verlon E ... OperBldMfg 0 — —
DrainTile
59 21 Stout Agnes (Mrs T H) ... PkgLg E 2½
55 71 *Strayhorn Frealen D ... Jly 8 F 3*
55 41 Strickiin American Service Station ... 2 H 3½
55 41 Stringfellow Ted ... Sstn 3 — —
58 12 Stroud Wayne E ... Rst 2 — —
54 11 Sugg Clarence D ... GrMt G 3½
54 11 Sugg & Stephens Grocery ... GrMt G 3½
17 61 Sullivan Chas P ... Weatherproofing Cntr — —
17 99 Sullivan Waterproofing Co ... D 2½
58 12 Sunnyside Sandwich Shop ... Rst 0 — —

17 11 Turner Mechanical Contractors Inc ... PlbgHtgVentAirCondtg 2 O 2
50 99 Tweedy Mobile Home Service & Supply ... W&RPartssup D 2
15 11 Twentieth Century Homes Inc ... Bld — —
25 11 Twin City Cabinet Shop ... Wood H 3½
76 94 Twin City Electric Co ... ArmatureRewinding F 3½
75 38 Twin City Glass & Upholstery Inc ... Atrp 3 G 3½
55 41 Twin City Gulf Service Station ... F 3
59 12 Twin City Liquors ... G 3½
15 11 Twin City Lumber & Molding Co ... BldCntrRetVenetianBlinds O 2½
C 25x15 Twin C Mattress & Furniture Mfg Co ... E 3
55 99 Twin City Mobile Homes Inc ... 0 — —
59 99 Twin City Monument Co ... 4 — —
55 21 Twin City Motors Inc ... UAts 2 O 2
C 34 71 Twin City Plating Co ... Electro Tinning — —
17 11 Twin City Plumbing Co NR ... 0 F 3½
27x51 Twin City Printing & Lithographing Co ... D 2
C 55 31 Twin City Tire Co● ... Ret D 2
75 34 RetreadingRecap
75 38 Twin City Truck Service ... Ro 3 H 4
55 11 Union Blytheville Inc ... Ats 4 D 2½
17 99 Union Insulation Co ... Cntr K 4
C 55 11 Union Motors Inc ... Ats 0 C+1½
56x51 Unique Shop ... FnyClGifts 2 G 4
C 17 52 United Carpet Service ... Laying F 3

50 64 White David Radio Supply Co● ... See Little Rock
76 99 White Outboard & Lawnmower Repair Service ... 8 H 3½
55 21 White Scott Used Cars ... D+ 2
55 41 Whitfield G W NR ... Sstn J 4
54 11 Whitfield Test Food Market ... 3 — —
Gr
54 11 Whitfield's Food Market ... Gr E 2½
53 92 White Home & Auto Supplies 4 F 3½
Gmds
C 50x77 Wiggins Sales & Service ... Whl B 1½
15 11 AirCondtgHtgeqpGCntr
55x41 Wilbern Herbert F (Happy) NR ... F 3
SstnFeedGrMt
59 21 Wilbur's Liquor Store ... — —
50 82 Wilkerson G M Diesel Inc ... Whl 2 C+ 2
76 99 RpMch
76 21 Williams C L Radio & TV Service ... G 3½
Rp
54x11 Williams George H ... GrFrn G 3½
55 41 Williams Service Station NR ... E 2½
55 41 Williams 66 Service Station 1 G 3½
59 12 Williamson Drug Store ... D+ 2
07 31 Willits Ted R & Son Bermuda Farms ... LandscapeSer 0 F 3½
75 38 Wilson Garage ... Atri E 2
17 21 Wilson Joe B ... Ptg G 4
76 21 *Wilson Radio & Television ... Ro 1* E 2½
54 11 Wilson Sarah O (Mrs E G) ... Gr 1 Inv
50 13 Winchester Auto Stores Inc ... See Pine Bluff
01 32 Wirges John G Jr NR ... DairyFarm D+ 2

Classification of Businesses and Industries:

10 Metal Mining
10 11 Iron ores
10 21 Copper ores
10 31 Lead and zinc ores
10 41 Gold ores
10 42 Lode gold†
10 43 Placer gold†
10 44 Silver ores
10 51 Bauxite and other aluminum ores
10 61 Ferroalloy ores, except vanadium
10 62 Manganese ores†
10 64 Tungsten ores†
10 69 Ferroalloy ores, except vanadium, n.e.c.*†
10 81 Metal mining services
10 82 Mercury ores
10 83 Titanium ores†
10 84 Uranium-radium-

14 94 Native asphalt and bitumens†
14 95 Pumice and pumicite†
14 96 Talc, soapstone and pyrophyllite
14 97 Natural abrasives, except sand†
14 98 Peat†
14 99 Miscellaneous nonmetallic minerals, n.e.c.*

15 Building Construction —General Contractors and Operative Builders
15 11 General building

17 93 Glass and glazing work
17 94 *Excavating and foundation work*
17 95 Wrecking and demolition work
17 96 Installation or erection of building equipment, n.e.c.*
17 99 Special trade contractors, n.e.c.*

19 Ordnance and Accessories
19 11 Guns, howitzers, mortars and related equipment†
19 25 Guided missiles and

20 45 Blended and prepared flour
20 46 Wet corn milling
20 47 Dog, cat and other pet food
20 48 Prepared feeds and feed ingredients for animals and fowls, n.e.c.*
20 51 Bread and other bakery products, except cookies and crackers
20 52 Cookies and crackers
20 61 Cane sugar, except refining only
20 62 Cane sugar refining
20 63 Beet sugar
20 65 Candy and other confectionery products
20 66 Chocolate and cocoa products
20 67 Chewing gum
20 71 Candy and other confectionery products
20 72 Chocolate and cocoa products†
20 73 Chewing gum†
20 74 Cottonseed oil mills
20 75 Soybean oil mills

TABLE C-1 .--Percent of total credit held by branches (branch credit ratio) by type of firm, 1970 (in $1,000's)

Type of Firm	Dardanelle					Ozark					Sallisaw				
	N	N Branches	Total Credit	Total Branch Credit	Branch Credit Ratio	N	N Branches	Total Credit	Total Branch Credit	Branch Credit Ratio	N	N Branches	Total Credit	Total Branch Credit	Branch Credit Ratio
Groceries	12		190.0			11	1	1348.0	1000.0	74.2	13		253.0		
Service Stations	7		108.0			9		176.8			8		108.0		
General Stores	8		468.0			8		370.6			12	3	1595.0	1250.0	78.4
Specialty Stores	33	3	2824.2	1000.0	35.4	40	3	1590.0	109.4	6.9	29	3	2734.0	1406.3	51.4
Services	19		703.8			13	3	2487.8	2000.0	80.4	18		750.0		
Manufacturing	19	1	1377.5	N.R.*		12	2	282.5	125.0	44.2	32	5	1662.9	659.4	39.7
Total	98	4	5671.4	1000.0	17.6	93	9	6895.9	3234.4	46.9	112	11	7102.9	3315.7	46.7

*No rating reported

Source: Dun & Bradstreet Reference Book, 1970

TABLE C-2 .--Amount of total credit strength for general stores and specialty stores (in $1,000's), 1940, 1950, 1960, 1970

	Dardanelle		Ozark		Sallisaw	
	N	%	N	%	N	%
1940						
Total Credit All Firms	2493	100	1664	100	3018	100
General stores	137	5	202	12	346	11
Specialty stores	789	31	154	9	113	3
1950						
Total Credit All Firms	3186	100	6905	100	3869	100
General stores	335	10	505	7	645	16
Specialty stores	1505	47	703	10	670	17
1960						
Total Credit All Firms	5484	100	4789	100	4027	100
General stores	341	6	270	5	810	20
Specialty stores	1758	32	902	18	1078	26
1970						
Total Credit All Firms	5771	100	6896	100	7103	100
General stores	468	8	371	5	1595	22
Specialty stores	2824	48	1590	23	2734	38

Source: Dun & Bradstreet Reference Books

APPENDIX D

SAMPLES OF SUPPORTIVE DATA FOR COMMUNITY TYPOLOGIES

TABLE D-1.--Indicators of prosperity of Yell, Ark., Franklin, Ark., and Sequoyah, Okla. Counties, 1950, 1959, and 1969

	1950			1959			1969		
	Yell	Franklin	Sequoyah	Yell	Franklin	Sequoyah	Yell	Franklin	Sequoyah
Average size of farms (acres)	129.8	131.8	125.4	179.0	192.7	197.0	210.6	252.1	244.9
Average value of land & buildings/ farm	$ 5,375	$ 6,150	$ 3,545	$11,843	$11,281	$11,349	$48,760	$44,556	$48,425
Market value of all products sold	2,158.3	1,800.0	1,466.9	7,958.4	3,145.4	3,461.9	21,781.8	8,156.5	5,496.3

Source: Arkansas Data: W.A. Heffelfinger, Appendix, 1974
Oklahoma Data: U.S. Census of Agriculture, 1950, 1959, 1969

TABLE D-2.--Unemployment in the Arkansas River Corridor as compared to Yell (Ark.), Franklin (Ark.), and Sequoyah (Okla.) Counties 1950, 1960, 1970

	1950	1960	1970	Percent Change 1950-60	Percent Change 1960-70
Arkansas River Corridor (18 counties in Arkansas)					
Civilian labor force	217,691	226,733	277,639	4.2	22.5
Unemployed	10,195	12,684	12,220	24.4	-3.7
Percent unemployed	4.7	5.6	4.4	—	—
Yell County					
Civilian labor force	4,319	3,944	5,323	-8.7	35.0
Unemployed	129	207	208	60.5	0.5
Percent unemployed	3.0	5.2	3.9	--	--
Franklin County					
Civilian labor force	4,035	3,299	3,743	-18.2	13.5
Unemployed	173	375	295	116.8	-21.3
Percent unemployed	4.3	11.4	7.9	--	--
Sequoyah County					
Civilian labor force	5,198	4,597	7,221	-11.6	57.1
Unemployed	295	400	357	35.6	-10.8
Percent unemployed	5.7	8.7	4.9	—	—

Source: U.S. Census in W.A. Heffelfinger (Appendix, 1974)

*U.S. Census, 1950, 1960, 1970

TABLE D-3.--Continuity of Personal/Social Columns* from neighboring communities in Sample City papers, by decade and percent

	Dardanelle N=25 %	Ozark N=33 %	Sallisaw N=57 %
Years any given community had column:			
1950	12	24	16
1950, 1960	4	12	16
1950, 1960, 1970	40	15	28
1960	20	24	18
1960, 1970	20	12	9
1970	--	12	10
1950, 1970	4	--	3
Frequency of community column appearing:			
One time	32	61	44
Twice	28	24	28
Three times	40	15	28

*Columns presenting a few sentences of information about individual or family life, e.g., relatives visiting, house being painted.

Source: Newspapers --
Dardanelle Post Dispatch
Ozark Democrat Enterprise
Ozark Spectator
Sequoyah County Times

TABLE D-4.--Rural-oriented business and industry, mean credit ratings for Sample Cities, 1940-1970

Year	Total No. of Firms	No. of Agriculturally Based Firms	Percent	No. Rated or Estimated	Total Credit Limit ($1,000's)
			DARDANELLE		
1940	56	8	14.3	6	1,239.0
1950	78	11	14.1	9	790.0
1960	86	15	17.4	11	2,696.0
1970	98	7	7.1	4	553.0
Mean	-	-	-	-	1,319.5
			OZARK		
1940	64	9	14.1	9	66.5
1950	88	11	12.5	8	1,135.0
1960	85	11	12.9	6	580.0
1970	93	5	5.4	2	75.0
Mean	-	-	-	-	464.1
			SALLISAW		
1940	81	7	8.6	6	1,139.0
1950	85	3	3.5	1	156.3
1960	107	2	1.9	1	200.0
1970	112	2	1.8	1	750.0
Mean	-	-	-	-	561.4

TABLE D-5.--Percentage distribution of commerce and manufacturing and services based on recommended credit limits, Sample Cities, 1940, 1950, 1960, 1970

	Commerce %	Manufacturing and Services %
1940		
Dardanelle	43.2	56.8
Ozark	23.6	76.4
Sallisaw	16.7	83.3
1950		
Dardanelle	63.1	36.9
Ozark	21.3	78.7
Sallisaw	44.9	55.1
1960		
Dardanelle	41.1	58.9
Ozark	32.7	67.3
Sallisaw	57.2	42.8
1970		
Dardanelle	63.3	36.7
Ozark	40.2	59.8
Sallisaw	34.0	66.0

TABLE D-6.—Proportion of recommended credit attributable to outside firms with branches in Sample Cities, 1940-1970

	Dardanelle (000's)	Ozark (000's)	Sallisaw (000's)
1940			
Total credit	2492.9	1663.9	3017.8
Total branch credit	1500.0	1225.0	2505.0
Percent branch credit	60.2	73.6	83.1
1950			
Total credit	3185.8	6905.1	3869.4
Total branch credit	750.0	4231.6	1645.9
Percent branch credit	23.5	61.3	42.5
1960			
Total credit	5484.3	4789.0	4027.3
Total branch credit	2020.0	1650.0	1182.0
Percent branch credit	36.8	34.5	29.3
1970			
Total credit	5671.4	6895.9	7102.9
Total branch credit	1000.0	3234.4	3315.7
Percent branch credit	17.6	46.9	46.7

TABLE D-7.--Number and percent of credit-rated firms surviving, 1950-1970

	1940		1950		1960		1970		Percent Change	
	N	%	N	%	N	%	N	%	1950-1960	1960-1970
1940 Firms										
Dardanelle	56	100	18	32	15	27	8	14	-5.0	-13.0
Ozark	64	100	26	41	17	27	11	17	-14.0	-10.0
Sallisaw	81	100	27	33	16	20	9	11	-13.0	-9.0
1950 Firms										
Dardanelle			78	100	38	49	25	32	-51.0	-17.0
Ozark			88	100	37	42	25	28	-58.0	-14.0
Sallisaw			86	100	38	44	22	26	-56.0	-18.0
1960 Firms										
Dardanelle					86	100	44	51	—	-49.0
Ozark					85	100	40	47	—	-53.0
Sallisaw					108	100	44	41	—	-59.0

Source: Dun & Bradstreet Reference Books

TABLE D-8.--Employment status of persons 16 years old and over, selected characteristics, 1970

	Dardanelle		Ozark		Sallisaw	
	N (000's)	%	N (000's)	%	N (000's)	%
Total Employed	1416		827		1568	
Total Labor Force Participation	1481	61.1	910	46.7	1649	46.7
Male participation	914	80.2	601	69.4	1019	64.4
Female participation	567	44.2	309	28.5	630	32.3
Blue Collar	746	52.7	292	35.3	532	33.9
White Collar	338	30.9	400	48.4	750	47.8
Professional & Technical Workers	79	5.6	130	15.7	218	13.9
Government Workers	211	14.9	180	21.8	328	20.9
Federal	110	7.8	57	6.9	75	4.8
State	80	5.6	38	4.6	105	6.7
Local	21	1.5	85	10.3	148	9.4
Self-employed	161	11.4	83	10.0	146	9.3
Individuals in poverty	418	12.8	532	20.9	1237	25.6
Unemployment rate		4.0		9.1		4.9
Family Incomes over $15,000		4.2		2.7		0.0

TABLE D-9.--Place of birth of Sample City populations, by number and percent, 1970

	Dardanelle (N=3297) %	Ozark (N=2592) %	Sallisaw (N=4985 %
Arkansas	75.9	79.0	65.0
Different State	20.6	19.2	32.5
South	9.7	4.4	21.4
North Central	6.3	11.5	4.6
West	4.2	2.4	5.4
Northeast	.0	.1	1.0
Born Abroad	.2	.0	.0
State of birth not reported	3.2	1.9	2.4

Source: U.S. Census, 1970

TABLE D-10.--Residential mobility in Sample Cities since 1965, persons 5 years and older in 1970

	Dardanelle (N=3005) %	Ozark (N=2447) %	Sallisaw (N=4581) %
Same House	40.9	48.5	50.5
Different House in U.S.	54.0	49.2	45.0
Same county	24.2	31.2	22.1
Different county	29.8	17.9	22.9
Same state	19.9	14.6	8.6
Different state	9.9	3.4	14.3
Other	5.1	2.2	4.4

Source: U.S. Census, 1970

TABLE D-11.--Family stability of Sample City populations, 1970

	Dardanelle		Ozark		Sallisaw	
	N	%	N	%	N	%
Total persons in households	3257		2541		4828	
Family head	932	100.0	752	100.0	1306	100.0
Male	868	93.1	667	88.7	1136	86.9
Female	64	6.9	85	11.3	170	13.0
Population per household	3.0		2.7		2.8	
Husband-wife families with children under 18	471	50.5	304	40.4	554	42.4
Total persons under 18	992	100.0	771	100.0	1634	100.0
Living with both parents		87.8		82.6		80.4
Living with one parent		11.7		14.0		14.3
Living with neither parent		.5		3.4		5.3

Source: U.S. Census, 1970

TABLE D-12.—Characteristics of Sample City newspapers, 1950, 1960 and 1970

Characteristics	1950			1960			1970		
	Dardanelle Post-Dispatch	Ozark Democrat Enterprise	Sequoyah County Times	Dardanelle Post-Dispatch	Ozark Spectator	Sequoyah County Times	Dardanelle Post-Dispatch	Ozark Spectator	Sequoyah County Times
Range of Pages/ Issue	8-10	4-8	8-16	8-20	4-14	10-16	6-20	10-22	16-24
Percent of Pages Available for Study	85	98	100	98	100	100	100	98.1	100
Average Number of Pages/ Issue	7	6.4	12	10.25	8.0	13	11.5	12.75	21
Total Items/Year	746	972	1200	933	1003	1494	1357	1689	1682
News Stories									
Average Number Pages/Issue	2.59	3.3	4.3	3.47	3	6	4.23	4.2	8.5
Percent Space/ Issue	37	52	35.9	34	37.5	46.2	37	32.8	40.6
Total News Items/Year	508	624	719	622	683	872	801	1119	859
Percent of all Items	68.1	64.2	59.9	66.6	68.1	58.4	59.0	66.3	51.1
Advertisements									
Average Number Pages/Issue	4.41	3.1	7.7	6.78	5	7	7.3	8.6	12.5
Percent Space/ Issue	63	48	64.1	66.0	62.5	53.8	63	67.2	59.4
Total Number Ads/Year	232	288	440	303	292	562	478	505	700
Percent of all Items	31.1	29.6	36.7	32.5	29.1	37.6	35.2	29.9	41.6

TABLE D-12.--(Continued)

Characteristics	1950			1960			1970		
	Dardanelle Post-Dispatch	Ozark Democrat Enterprise	Sequoyah County Times	Dardanelle Post-Dispatch	Ozark Spectator	Sequoyah County Times	Dardanelle Post-Dispatch	Ozark Spectator	Sequoyah County Times
Pictures & Cartoons									
Total Number/ Year	6	60	41	8	28	60	78	65	123
Percent of all Items	.8	6.2	3.4	.85	2.8	4.0	5.7	3.8	7.3
Date Paper Established	1853	1881	1932	—	1911	—	—	—	—
Circulation*	940	770	2895	—	—	—	3800	4240	5860

*Source: Ayer and Sons, Directory of Newspapers and Periodicals

TABLE D-13.--Percentage distribution of items in Sample City newspapers

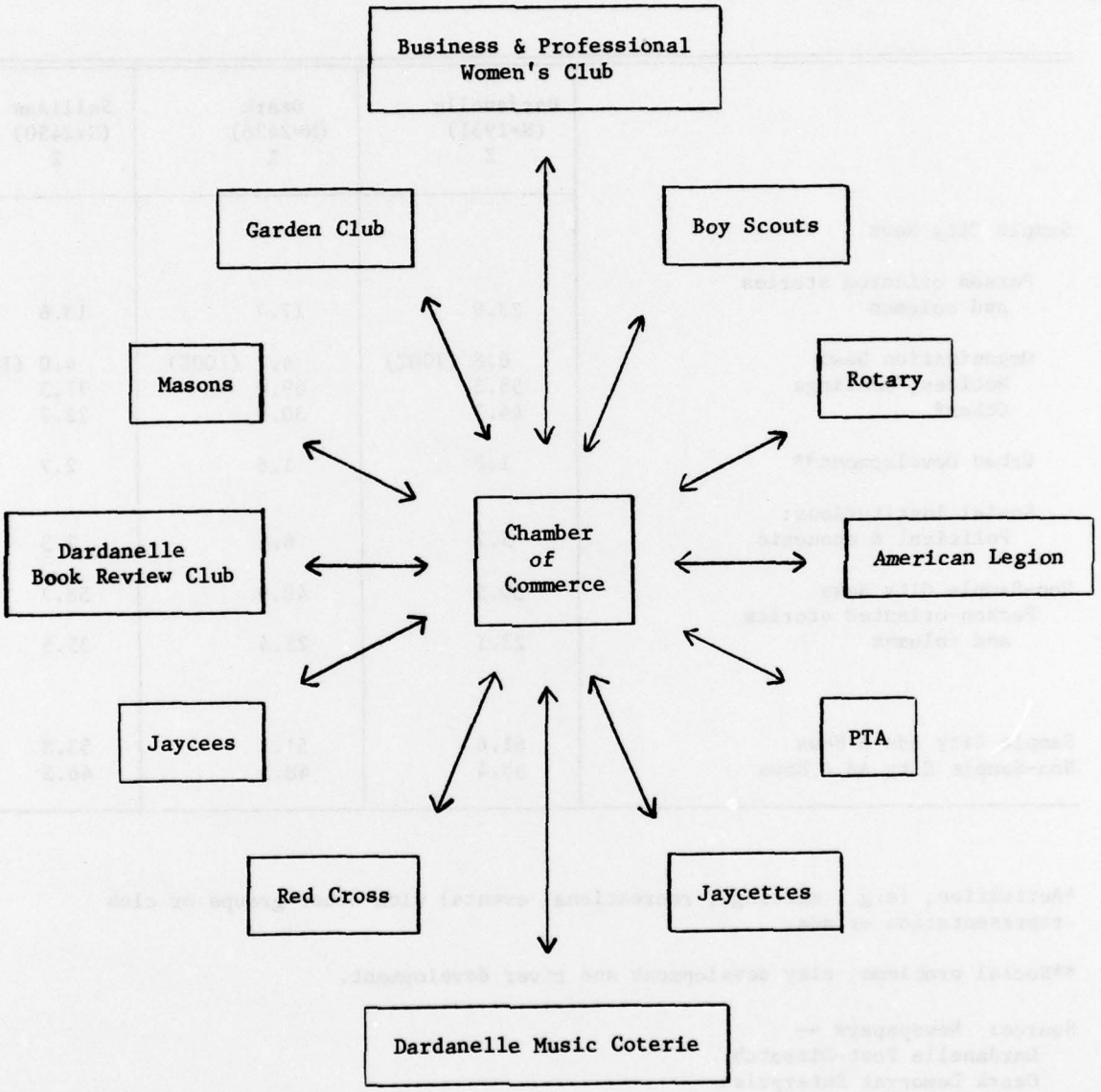
	Dardanelle (N=1931) %	Ozark (N=2426) %	Sallisaw (N=2450) %
Sample City News			
Person oriented stories and columns	23.9	17.7	13.6
Organization News	6.8 (100%)	4.7 (100%)	4.0 (100%)
Notices, meetings	55.3	69.0	77.3
Other*	44.7	30.9	22.7
Urban Development**	1.8	1.6	2.7
Social Institutions: Political & economic	5.7	6.4	7.3
Non-Sample City News	30.5	48.9	58.7
Person-oriented stories and columns	22.1	25.4	35.5
Sample City Ads & News	61.6	51.5	53.8
Non-Sample City Ad & News	38.4	48.5	46.2

*Activities, (e.g., meetings, recreational events) with other groups or club representation or ads.

**Social problems, city development and river development.

Source: Newspapers --
Dardanelle Post-Dispatch
Ozark Democrat Enterprise
Ozark Spectator
Sequoyah County Times

Fig. D-1.--Organizational interrelationships in Dardanelle*



*Overlapping memberships, interorganizational activities and joint sponsorship of community affairs. These interrelationships were noted as recurrent through many newspaper issues over the 30 years.

Motz, Annabelle Bender
A research strategy for social impact assessment : a tale of three cities / by Annabelle Bender Motz. -- Ft. Belvoir, Va. : U.S. Institute for Water Resources, 1977.
165 p. : ill. (IWR research report ; no. 77-R2)
Prepared under contract number DACW31-75-C-8023.
Bibliography: p. 103.
1. Water resources development - social aspects. 2. Arkansas River. I. Title. II. Series: U.S. Institute for Water Resources. IWR research report no. 77-R2.

HD1694 .A42 U584r no.77-R2

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